



\$9,000 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



\$1,000 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. Hartle,
Chicago, Ill.

First Month \$1,000

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

Charles Berry,
Winterset, Iowa.



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 deady, monotonous routine work and miserable earnings to incomes running anywhere from \$5,000 to \$10,000 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 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.

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-H

53 W. Jackson Blvd., CHICAGO, ILL.



NATIONAL SALESMEN'S TRAINING ASSOCIATION

National Salesmen's Training Ass'n,
53 W. Jackson Blvd., Dept. 21-H, 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.....



\$524 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.,
S. Minneapolis, Minn.



\$554.37 in One Week.

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

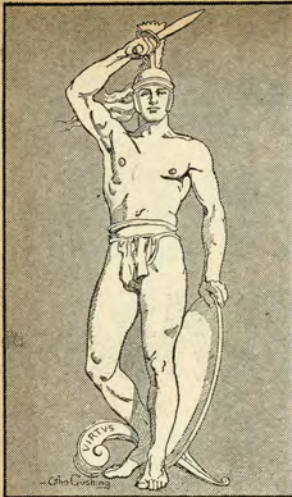
F. Wynn,
Portland, Ore.

\$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.



Strength



Edited by
Carl Easton Williams

Vol. IX

JULY, 1924

No. 5

CONTENTS

Cover, "Grace and Strength," by Jay Weaver

Frontispiece, "Come On In—The Water's Fine"	H. Armstrong Roberts	14
Getting Back to the "Strenuous Life"	Editorial	15
Why Do Track Athletes Break Down?	Walter Camp	16
<i>Photographs</i>		
Hello, Humidity!	Paul von Boeckmann	21
Growth and Health Through Food	Alfred W. McCann	22
Girl Scouting—A Cure for "Flapping"	Alice Mary Kimball	24
<i>Photographs</i>		
Your Back—The Keystone of Your Strength	Alan Calvert	28
<i>Photographs</i>		
Weston's Early Life—His Daughter's Own Story	Lillian Weston Hazen	32
<i>Photographs</i>		
Six Best Exercises for Women	Florence Whitney	36
<i>Photographs</i>		
"On Your Marks—Get Set—" (Autobiography)	Charles W. Paddock	40
<i>Photographs</i>		
Outing Eating	Alvin F. Harlow	46
How About Some Fast Ball Pitching?	T. Von Ziekursch	48
Constipation?—That's Obsolete	Carl Easton Williams	51
Do You "Look" Your Strength?	David Wayne	53
<i>Photographs</i>		
Massage Puts New Life into Tired Bodies	L. E. Eubanks	57
"Life Feels Like a Fight" (Serial)	Wilbur Hall	58
<i>Illustrations by Thomas Skinner</i>		
The Dinner Table—Making Whole Wheat Bread Is Easy	Jane Randolph	64
Can You Write a Better Letter Than This?		66
"The Mat"—Analytical Comment on Body Building	Alan Calvert	67
Strength of Hands and Grip Straightening Bow-Legs and Knock-Knees		

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.

RENEWALS.—When your subscription expires we will place a subscription blank in your final copy. Renewals should be sent in promptly in order to receive the next issue. Please use the subscription blank for this purpose so that we may extend your subscription in our files. Notice of change of address should be accompanied by the old address as well as the new.

Copyright, 1924, by The Milo Publishing Co.

I Guarantee To Make You A Public Speaker or I Won't Take A Penny

I'll Show You How To Control One Man Or A Big Audience—How To Conquer Stage Fright—How To Increase Your Earnings—All By The Power Of Effective Speech



Give Me 15 Minutes a Day

That's all I want, 15 minutes a day, to prove to you beyond a shadow of a doubt that I can do for you what I have done for other men—*increase your income, make you a leader, make you successful.*

C. F. Bourgeois, President of Robischon and Peckham, says: "The lesson on 'How to Develop Personality' is alone worth the entire cost of the course. It has been of real practical help to me."

Walter O. Ford of the Ford Manufacturing Company writes: "Was always considerably flustered when called upon to speak. Now, thanks to your course, I feel perfectly at home and confident. Every man who wants a strong personality and the power of effective speech should take your course."

H. B. McNeal, President of the Telephony Publishing Company, says: "It should appeal to every man and especially to young men who are ambitious for rapid promotion."

Get Big Money Jobs

These men write as do hundreds of other successful men concerning this amazing new method of making you a forceful, fluent, convincing speaker. The world is at the feet of the man who can hold others by the sheer power of speech. Powerful speech shortens the road to success. Leadership depends on the ability to talk forcefully, fluently and convincingly. Why do salary increases and the big-pay jobs seem to just come naturally to one man when all about him are men of equal ability in other respects? Why in social life does one man have great influence and be the center of interest when others are ignored? The answer is obvious. The suc-

cessful man has the knack of making every word he says or writes count in his favor. He is never at a loss for the right word and he presents his proposition or views in clear, logical and forceful language—with the result that he gets what he goes after. He has the wonderful power to

Sway Others At Will

and he is welcomed everywhere and listened to with deep respect. How many men can address a dignified board of directors and

how to rise quickly above the mass in business, how to step to promotion, how to be a leader, with poise and the assurance to plunge right into any subject and convince your hearers of your point of view. By this amazing new method, made possible by Professor R. E. Pattison Kline formerly dean of the Public Speaking Department of the Columbia College of Expression, being a powerful speaker is easy and simple.

Free Self-Test

To convince you fully that you can become a powerful and convincing speaker by giving me only fifteen minutes a day right in the privacy of your own home, I will send you a remarkable FREE self-test, and then you can judge for yourself. I want you to determine whether or not you wish to have this power of speech that men envy and women applaud. Also, because I know that you will be so delighted that you will tell others of this amazing method, I will send you a

Special Offer

if you fill in the coupon and mail at once. You like thousands of others can quickly and easily learn the secret of achievement both in position and salary and all this without leaving your present position and by devoting only a few minutes a day to the fascinating material I will send you. Just give me your name and address on the coupon.

NORTH AMERICAN INSTITUTE

Dept. 197-B, 3601 Michigan Ave., Chicago

North American Institute
Dept. 197-B, 3601 Michigan Ave., Chicago, Ill.

I am interested in your Course in Effective Speaking and your Free self-test and special offer. Please send me full particulars. This request places me under no obligations of any kind.

Name

Address

City State

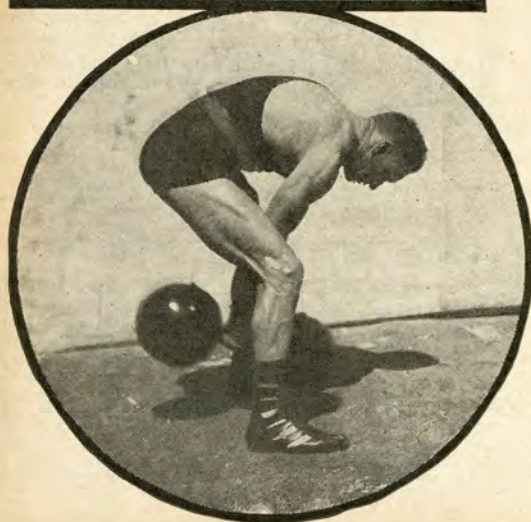
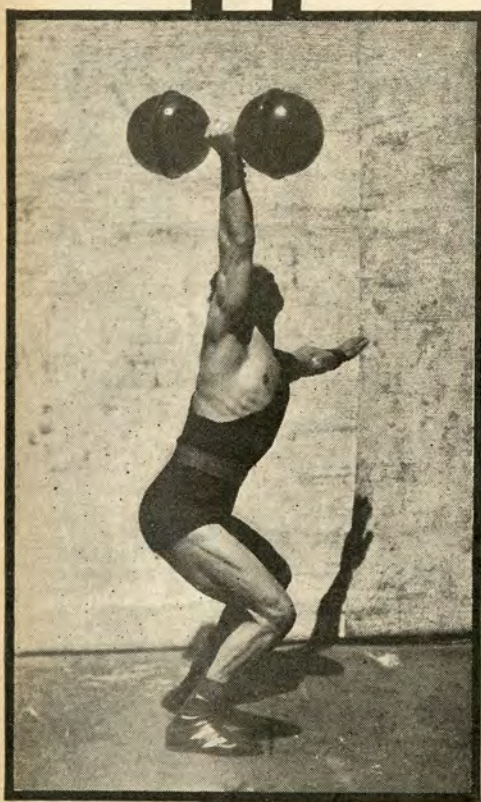
What This Amazing Course Teaches You

- How to make after-dinner speeches.
- How to write better letters.
- How to sell more goods.
- How to have a good memory.
- How to enlarge your vocabulary.
- How to make political speeches.
- How to develop self-confidence.
- How to have a winning personality.
- How to be master of any situation.

have their plans and ideas approved? How many men can appear at a moment's notice before an audience and create enthusiastic notice? Not many. And yet there is no reason why any man should not be able to do these things just like successful men are capable of doing them. Powerful and convincing speech can be easily acquired.

Easy For Anyone

I don't care what line of business you are in. I don't care how embarrassed you now are when you are required to speak. I don't care what you think now. I can show you



SUPER-STRENGTH and PERSONAL SUPREMACY

LAST month we announced, in these pages, the publication of Mr. Alan Calvert's new book, "Super-Strength." Already there has been a great demand for the book, and we believe this is because Mr. Calvert's work fills a long felt want.

For several years Mr. Calvert has been specializing on the development of the individual. All his interest is along that line. While not absolutely opposed to class work or group training, he believes that any man or boy, who wishes absolute physical perfection, can achieve his ambition more easily, and more rapidly through the medium of individual training and individual effort. The soundness of his theory is proven by the astonishing number of magnificently developed men who have been practically created by his methods, and under his direction.

Absolutely the Best Book of Its Kind

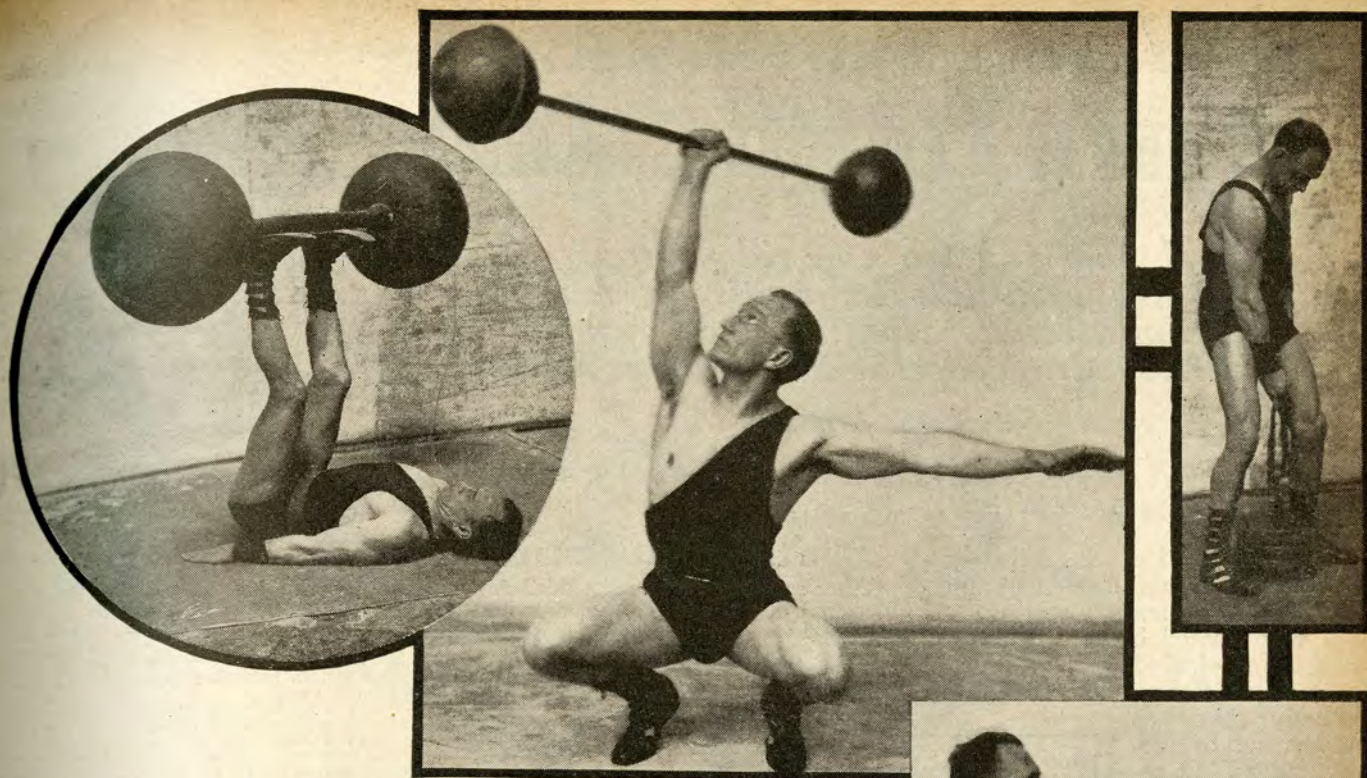
The book, "Super-Strength," was planned and written to help the individual reader. At the present time, there are tens of thousands of men of all ages who are seeking physical perfection—who are not satisfied with merely keeping themselves fit, but whose ideal is to bring their bodies to the highest state of physical beauty, bodily strength, and muscular development. Those are the men who are not satisfied with being just one of the crowd, and who are working to get that personal supremacy which comes from a superb physical equipment.

If you are one of that class, we earnestly recommend that you get a copy of this book, "Super-Strength." It approaches the problem of body-building, health-improving, and strength-making from an entirely new angle.

It Covers the Whole Field

Several of the chapters are devoted entirely to instruction. Among the exercises given, there are many which are entirely new, and here published for the first time.

One section of the book is devoted to the subject of lifting records, and gives the names and pictures of the men who made the records. In our opinion, the most fascinating part of the book is in those chapters which Mr. Calvert devotes to the analysis of bodily physique, and muscular development, illustrating his theories with dozens of pictures of magnificently formed athletes.



CHEST DEVELOPMENT— *The One Great Essential*

Those of you, who are ambitious to get big chests, can learn a lot by reading the author's original theories in regard to the development of the chest. He claims that by practicing certain exercises to increase the size of the rib-box, it is possible for any man to increase the breadth of his shoulders in direct proportion to the increased size of the chest, and backs up his statements by citing the cases of several men, who have gained eight, ten, and twelve inches in chest measurement in one year's training.

In our last announcement we said that the book contained 272 pages. This was an error, because it contains 320 pages in all—224 pages of text, and 96 pages of illustrations. Altogether, there are 175 separate pictures, many of which were taken especially to illustrate this volume. Never before have there been so many splendid pictures of magnificently developed men bound between the covers of one book. Those of you, who have read Mr. Calvert's articles, and his department called "The Mat" in this magazine, are familiar with his grasp of all subjects connected with body-building. If you get a copy of "Super-Strength," you will find that you are richly rewarded for your investment.

Remember the Name of the Book is

SUPER-STRENGTH

By

ALAN CALVERT

320 Pages

Cloth bound

Lavishly illustrated

Price \$2.50, Postpaid

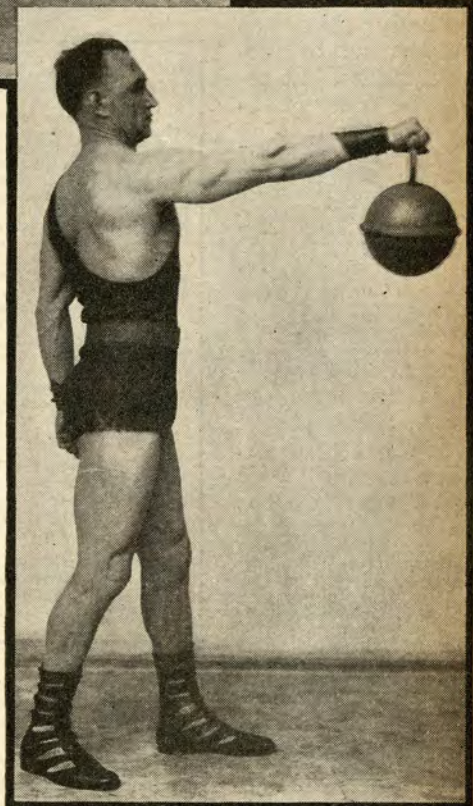
Send cash, check, or money order to the

MILO PUBLISHING CO.

BOOK DEPARTMENT

2739 N. PALETHORPE STREET

PHILADELPHIA, PA.



Milo Publishing Co.,
2739 N. Palethorpe St.,
Philadelphia, Pa.

S-7-24

Gentlemen:

Enclosed find cash
 check
 money order

for \$2.50, for which please send me a copy
of SUPER-STRENGTH, by Alan Calvert

Name.....

Street.....

Town.....State.....

How I Banished Catarrh, Coughs and Colds

And how you too can rid yourself of catarrh, bronchitis, laryngitis, hay fever, asthma, swollen tonsils, and adenoids without drugs, operations, salves or dope

By Ernest Williams



I HAD catarrh the worst way. Some days I could hardly breathe.

Coughing and expectorating—especially in the morning—was annoying, exhausting and nauseating.

I was treated by seven different physicians—including three nose and throat specialists—and I tried every remedy that was advertised or recommended but received only temporary relief.

One treatment I submitted to was having my nose burned out at frequent intervals, which caused excruciating pain.

Then I had two operations to remove some of the bone and cartilage from my nose. These operations cost me \$300, caused me great suffering, and did not help the catarrhal condition a particle.

After all this expense and suffering without any satisfactory results, you can well imagine that I was in the depths of discouragement.

I had about made up my mind that nothing would free me from this disgusting disease.

A Dangerous Disease

Then one day, while reading my favorite magazine, I ran across an advertisement of a little book. The name of this book is "Curing Catarrh, Coughs and Colds," by R. L. Alsaker, M. D.

I sent for this book at once.

It told of a simple, easy, pleasant remedy that didn't cost a cent.

I followed instructions, and in one week my condition was wonderfully improved, and in eight weeks I was absolutely free from the slightest symptom of the disease.

That was three years ago, and I have never been bothered with catarrh from that day to this.

Don't Neglect Catarrh

After spending thousands of dollars on doctors, drugs and operations without results, I was permanently cured at a total cost of only \$3.00 which I paid for the book.

Is it any wonder that I am grateful to the publishers of that book and am anxious to tell other sufferers about it?

Thousands of people are victims of catarrh.

It is a filthy, repulsive and dangerous malady.

Some have it occasionally and some have it all the time.

There are many kinds of catarrh besides catarrh of the head and throat.

When catarrh affects the chest it is called bronchitis. If it is allowed to run its course and becomes chronic, it means good-bye to health and happiness. It makes sound, healthful sleep impossible, and soon saps the strength of the sufferer. It quickly weakens the lungs making the individual an easy victim to influenza, pneumonia and consumption.

Many people suffer from catarrh of the stomach and small intestines. This always means indigestion in one of its worst forms. Then there is catarrh of the large intestine which frequently brings on colitis—inflammation of the lower bowel.

Catarrh of the ear causes severe headaches, head noises and general discomfort.

Catarrh of the liver is the forerunner of various diseases. It produces jaundice and gall-stones, and often brings much suffering from liver colic.

If you catch cold easily you are in a catarrhal condition.

If you have one cold after another, you will soon suffer from chronic catarrh, which is sure to produce some more serious disease—although catarrh itself is certainly bad enough.

If you—or any member of your household—is afflicted with catarrh, don't ignore or neglect it.

It is a mighty serious ailment. It can bring on many more dangerous diseases. Destroy it before it is too late. You can do it just as I did. It's easy when you know how.

And in getting rid of your catarrh, you will get rid of a lot of other troubles. You will lose that bad taste in the mouth.

Your coated tongue will clear up. That terrible tired feeling will vanish. That troublesome gas will stop forming in stomach and bowels. Pains in the back will take flight. Headaches will disappear. Rheumatism will be a thing of the past.

You don't need to take my word for all this. You can easily prove it for yourself. But don't keep on wasting time and money on pills, powders and potions that won't do you a bit of good.

Get rid of your catarrh—just as I got rid of mine—by a simple, natural, pleasant, way that cures you to stay cured.

How to get rid of your catarrh—how to get well and stay well—is a simple secret that you can quickly learn and easily follow.

This little book—worth its weight in gold to every catarrh sufferer—is by Dr. R. L. Alsaker, one of the leading specialists of this country, who has cured thousands of the most terrible cases of catarrh after all other remedies have failed.

Get this book now—don't put it off another day! It gives full, clear and simple instructions on the cause, prevention and cure of catarrh, asthma, hay fever, coughs, colds, swollen tonsils and adenoids.

The book contains no whims, fads or fallacies. It is absolutely free from bunk and medical bombast. It sets forth—in plain, simple language—a natural, common-sense, proved-out and time-tested plan that is easy and pleasant to follow—a plan that enables you to get well and stay well.

Cure Yourself Now

It tells the truth about these annoying, objectionable and health-destroying troubles and it gives you a simple, safe, sure cure, without drugs, medicines, exercise, baths or apparatus of any kind.

It is a treatment—a wonderfully successful treatment—that you follow yourself—right in your own home—without the expenditure of a single extra nickel.

There is nothing difficult, technical, mysterious or undesirable about this treatment. It is easy to understand. It is simple to follow. Any one—young or old—can reap the utmost benefit from it.

If you suffer from coughs, colds, catarrh, asthma, hay fever or any such ailments—if you have been spending time and money on doctors, drugs, special treatments and operations, stop it right now—today—at once!

Learn how to cure yourself—quickly and economically—just as I did.

Here is the way to do it:

Send no money in advance. Simply write a letter or a postal card to Grant Publishing Company, Inc., Dept. 100, 1133 Broadway, New York, N. Y., asking them to send you a copy of Dr. Alsaker's book "Curing Catarrh, Coughs and Colds," and stating that when the postman delivers it you will hand him \$3.00 plus a few cents delivery charges in full payment, with the understanding and agreement that you may keep the book for 30 full days and follow its instructions and then if you are not enthusiastic over the results you have obtained—if you do not note a remarkable improvement in your condition—if you are not more than satisfied that you have made the best \$3.00 investment in health and happiness that you ever made—you may retain the book and your \$3.00 will be immediately refunded. (Send \$3.25 cash in advance on orders outside the United States.)

Don't keep putting it off!

If you want to get rid of your catarrh, you can do it—and do it now. There is nothing experimental about Dr. Alsaker's treatment. It has made good in thousands of cases. It includes no drugs, serums, sprays or salves. And it costs you nothing, except the price of the book, while doctor's bills, prescriptions and patent remedies that do not cure use up a large part of any man's pay check.

Send for the book today. Follow its simple instructions and you will receive the same splendid results I received and thousands of others are receiving.

Read this Evidence!

If you have been puzzled about the cause of catarrh, coughs and colds this article is going to open your eyes and make you think. Read what these people say about Dr. Alsaker's methods:

"Had catarrh since childhood. Doctors unable to cure me. Now entirely well, thanks to your treatment." S. N. R., Canada.

"Bronchitis from which I suffered for five years is now a thing of the past." J. F., Indiana.

"By following instructions contained in 'Curing Catarrh, Coughs and Colds,' I cured in 5 days a cold that had been with me for over six months." H. H. M., Tenn.

"I had intestinal indigestion and my wife the worst case of constipation. Now both are cured and have had no cold since we got your book." H. F., Jr., Ill.

"The teachings applied have relieved me from asthma, which I have been at the mercy of for the past 15 years." Mrs. J. R. J., Cal.

Shot to Pieces in the World War, This Soldier Doctor, Born a Weakling, Came Back Strong Thru Strongfortism

140 S. Hancock St.,
Wilkes-Barre, Pa.
April 1, 1924

telligent. Without question **Lionel Strongfort** is the real physical and health specialist. His lessons read like an interesting, simple story that, if put into execution, carries the greatest possible life into the minutest histological structures of the living organism.

If one wishes to develop the greatest possible strength, speed and agility, including the great essentials of health and vitality, let him enroll at once. Health is a priceless possession. Attain it while you can. Preserve it while it is still possible.

Lionel Strongfort
Newark, N. J.

Dear Mr. Strongfort:—

When I was born my parents never thought I would survive infancy, due to the fact that I was weak and underweight. I have not experienced real health, strength and vitality until I began practicing **Lionel Strongfort's** course in Physical Culture.

I served in the U. S. Army eight years. During the World War I was gassed and wounded and through **Strongfortism** came back to health.

I have practiced many other systems but found **Strongfort's** the most in-

Very truly yours.

Joseph T. Stashak

(NOTE: The above unsolicited letter from Dr. Stashak is in my files in the doctor's own handwriting. It is one of the most remarkable documents in the history of physical regeneration and is, like all **Strongfort** testimony, the spontaneous expression of an appreciative and grateful heart.)



Dr. Joseph T. Stashak



WALTER STRATTON

A STRONGFORTIST
who writes:

Leetonia, Ohio
April 10, 1924.

Dear Teacher:—

It is 22 months since I started the good work of building up my body, and it was a lucky day for me when I found **Strongfort** and enrolled under your instruction. The Physical Culture life is the only life for me, now and always. I can't say too much in favor of what you have done for me, and I want to go further under your teaching in developing myself.

Sincerely yours,

Walter Stratton

You too can do the same. You can become one of the most superb specimens of masculinity living, if you will take yourself in hand and really reach out for the great prize of bodily perfection. If you want success in life, love and in business, family and social connections send at once for this remarkable book of body truth and inspiration, the masterpiece of the world's most perfect man. Don't even send postage—just the coupon—this book is yours with my compliments.



LIONEL STRONGFORT
Dr. Sargent of Harvard declared that "Strongfort is unquestionably the finest specimen of physical development ever seen."



L. V. GALLIVAN

A STRONGFORT pupil who writes:

"MR. STRONGFORT, YOU CERTAINLY ARE A WONDER!"

L. V. Gallivan

Mr. Gallivan is on his way to a professional stage career. You can see for yourself that he is well upon his way. He is one of thousands of **Strongfortists** who recognize the gold of physical dominance and who have remade themselves from common clay into the fine stuff of supreme manhood.

Those who have intelligently followed my messages to the manhood of the world cannot have failed to recognize the deep and sincere tone of my best advertisers, the men whom I have remade from physical incompetents into fine and superb samples of humanity. These men have no selfish ends in view, nothing to gain except the satisfaction of passing on to others—to you—the profound truths to which I have devoted my life and energies—the deep secrets of human perfection, beginning with the acquirement of a perfect body and extending to the development of an overmastering mind. If there is anything you have failed to attain in this world, I am sure you have much to learn and gain from knowing me. For that you have the honest word of those who know me.

A truly extraordinary expression of American manhood. This man refused to tolerate the burden of physical incompetence with which he was born. By the earnest practice of **Strongfortism** he became a marvel of physical ascendancy such as is seen rarely in a lifetime.

LIONEL STRONGFORT

Physical and Health Specialist
for 25 Years

Dept. 1443, NEWARK, N. J., U.S.A.

Lionel Strongfort
Dept. 1443
Newark, N. J.
U. S. A.

Send me, postpaid and without cost or obligation to me, your world famous Gift Book of the Body. It may tell me something astonishing about me.

Name.....

Address.....

GIFT COUPON-CLIP

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.



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 seurf.

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.

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.

Superfluous Hair. Hair Tonics.

Eyebrows and Eye-lashes.

MACFADDEN PUBLICATIONS, INC.

Dept. S-7, Macfadden Building

1926 Broadway, New York City

MACFADDEN PUBLICATIONS, INC.

Dept. S-7, Macfadden Building

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.....

MAKE THEM ALL SIT UP AND TAKE NOTICE OF YOU

MAKE every one who gazes upon you say to himself, "Ah, there's a healthy, strong and manly chap." We all know what a welcome change it is to look upon a person of that magnetic type after viewing the countless puny, sickly and unattractive men and women who pass us in the course of one short day.

You Will Be Surprised How Easy It Is to Get Big Results

for there is really nothing difficult in putting yourself in the class with the strongest, healthiest and most energetic men. My **METHODS** are based on the progressive principle. Each lesson includes exercises that employ and benefit every muscle in your body, but—these exercises are dropped as soon as you get the more advanced set in the next succeeding lesson. This saves you time and insures a steady advance in size, power and vitality. This progressive principle is what makes my pupils find **MY COURSE** so interesting. It gives them something to go after.

Mine Is a 3 Months' Course

In the first ten days (or, in other words, in about 2½ hours actual exercising time) you will make a considerable improvement in your physical condition. My pupils are proving this. And if 2½ hours exercising will bring noticeable results, imagine what the remaining 80 days (or 20 hours exercising time) will do for you.

Would You Give 23 Hours of Your Time

to look, feel and *be* a perfect physical specimen? You surely would if you stopped to think that even a minor sickness would put you out of commission for that length of time. And if you total up the number of miserable hours you lost in the past year with colds, headaches, bilious attacks and other minor ailments, you will find that it amounts to far more than 23 hours.

Go even further, and try to imagine the enormous amount of precious moments thrown away in a lifetime not only by these minor ailments, but by the hundreds of more serious ones to which the human body is subject.

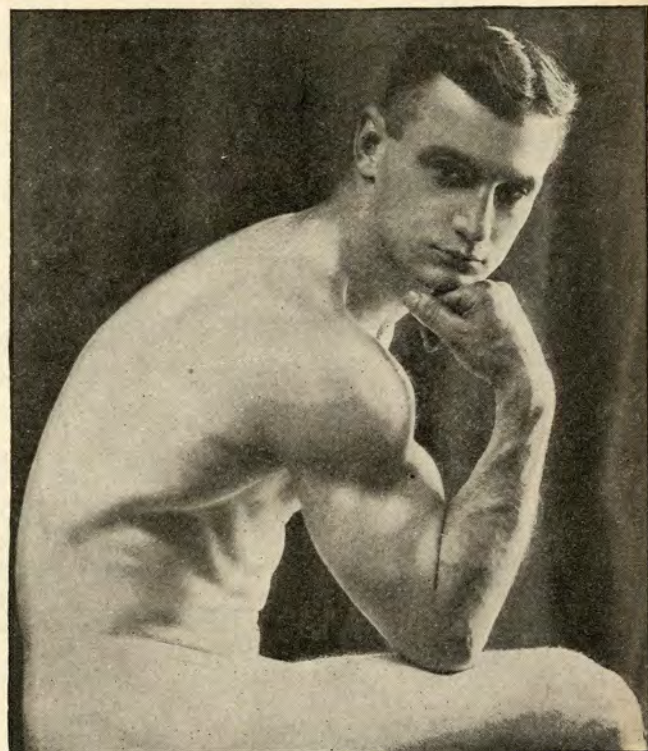
I ask you now, "Is it worth 23 hours of your time to be able to miss these avoidable and painful set-backs?" I'll say it is!—and you will agree with me when you try it out for yourself. Remember that prevention is always better than cure. By the proper kind of exercise you can so *vitalize* your body that you will get rid of your present weaknesses and render yourself immune to all those energy-sapping, health-destroying minor ailments. A body in perfect condition *resists disease*.

The Large, Full and Rounded Muscles

that my methods give you will mean physical perfection. The results will not be the knotty or abnormal type of development. That type can never be physical perfection. How to get this Real Physical Perfection is told you by my 64-page Booklet, which is



CHARLES MacMAHON
In Muscular Pose



CHARLES MacMAHON

ABSOLUTELY FREE

The title is "The Royal Road to Health and Strength." It will positively give you more valuable information on physical culture, feats of strength, agility and endurance than any other book of its kind. It is beautifully illustrated with photos of myself and my pupils, and tells of the results and achievements obtained from my course. Before your mind changes to something else, tear off the coupon and mail it.

CHARLES MacMAHON
Studio A-18,
2109 N. Orianna St.,
Philadelphia, Pa.

CHARLES MacMAHON

Studio A-18

2109 N. ORIANNA STREET, PHILADELPHIA, PA.

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.

IMPORTANT

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

Name.....

Address.....

City and State.....

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
 manure: 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.

After you have made the five days' free examination, if you decide that you want the Encyclopedia, just send us a deposit of \$2.00 and the other four volumes will immediately be sent to you prepaid. After you have received these additional volumes, all you pay is \$3.00 a month until you have paid the total cost of \$35, for the entire five volumes.

If you care to pay cash, then remit only \$31.50.

It is not necessary, however, to pay all cash—we gladly accept orders on the \$3.00 per month payment plan.

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.

To 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.

Free Examination of Any One Volume

The general contents of each of the five volumes are:

Vol. I—Anatomy, physiology, diet, food preparation.

Vol. II—Physical training, gymnastics, corrective exercises, physical culture exercises for women, sports, athletics, beauty culture.

Vol. III—Fasting, hydrotherapy, first aid, spinal manipulation, mechanical diet and regimens.

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.

This offer, however, is restricted to persons residing in the United States and Canada.

If you want to enjoy glorious health—if you want to drop years from your age—if you want to radiate joy and happiness—if you want to have greater success—winning energy, power and vitality than ever before, you must live according to Nature's laws—which are clearly shown in this wonderful work—The Encyclopedia of Physical Culture. Select the volume you want to examine and mail the coupon today.

A Complete Education in Physical Culture

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.

- (1) A complete work on Anatomy fully illustrated.
- (2) A Physiology in plain language, and embracing many illustrations.
- (3) A reliable and comprehensive handbook on Diet.
- (4) A complete Cook Book.
- (5) A book on Exercise in Its Relation to Health.
- (6) A handbook on Gymnastics, with full instructions on drills and apparatus work of every sort, with hundreds of illustrations.
- (7) A book illustrating and describing every form of Indoor and Outdoor Sports and Exercises—complete courses in Boxing, Wrestling, etc.
- (8) Handsome colored charts and instructions for Developing a Powerful Physique.
- (9) A complete handbook on Beauty-Culture.
- (10) The most complete and extensive work on Fasting ever published.
- (11) A comprehensive work on Hydrotherapy, including water treatments of every variety.
- (12) A book on Mechanical Therapeutics, giving full details and scores of pages of illustrations of physio-pathic treatments.
- (13) A thorough work on First Aid with drugless methods.
- (14) A lavishly illustrated work on Diagnosis, giving plainly written instructions for detecting diseases of every sort, and finding their cause.
- (15) A comprehensive illustrated book on Home Treatment for All Diseases, alphabetically arranged and written in plain language.
- (16) An Anatomy of the Sexual Organs.
- (17) Sexual Weakness and Disease, Their Cause and Cure.
- (18) Rules for Happy Marriage and Parenthood.
- (19) A complete work on Childbirth—how to make it safe and comfortable.
- (20) A practical work on the Training of Children.

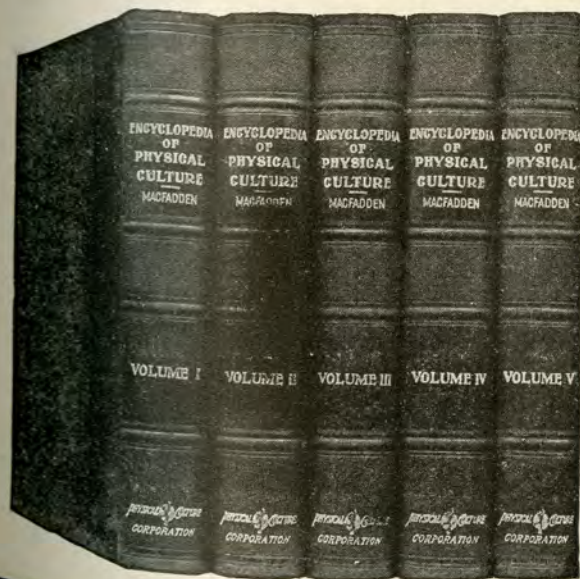
MACFADDEN PUBLICATIONS INC.

Dept. S-7
Macfadden Bldg.
1926 Broadway
New York City

London Agent:
ATLAS PUBLISHING CO.
18 Bride Lane
London, E. C.

Macfadden Publications Inc.

Dept. S-7
Macfadden Bldg.,
1926 Broadway
New York City.



5 Beautiful Volumes Bound in Leather and Cloth

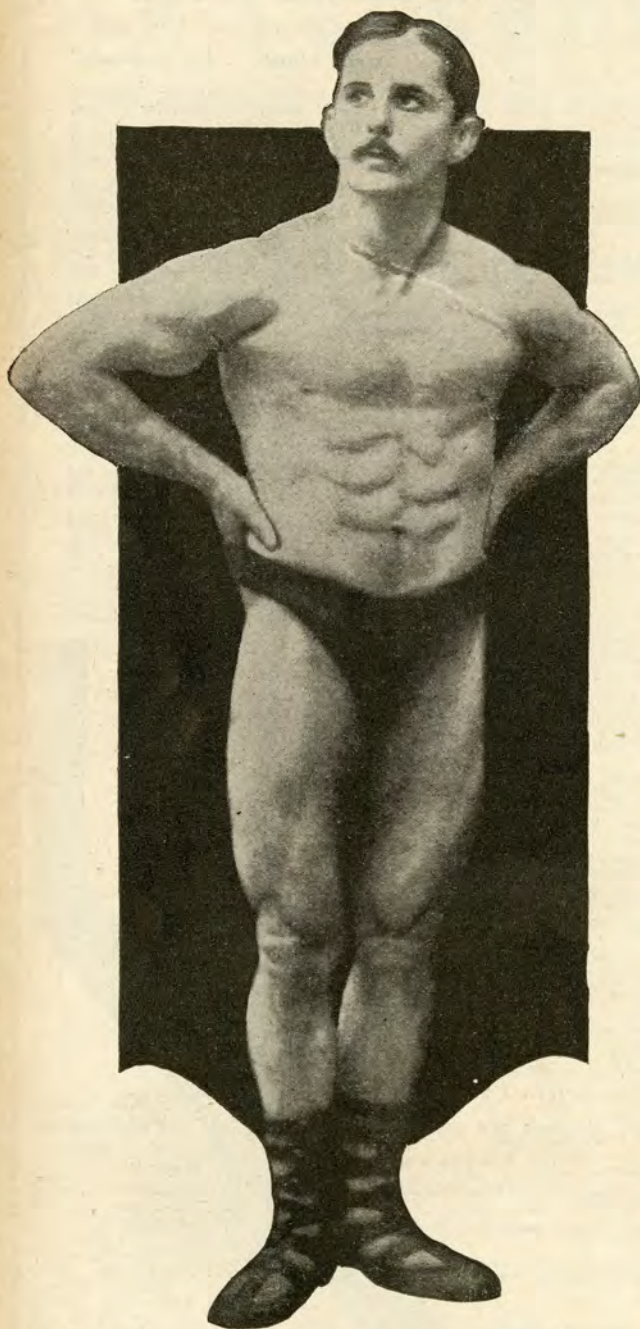
Send No Money—Just this Coupon—

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 acceptance of this offer includes a year's subscription to Physical Culture Magazine.

Name.....
Occupation.....
Residence.....
Employed at.....
Business Address.....

Look Before You Leap Into

Make the Instructor Show You What Kind of Apparatus He Uses In Training His Pupils



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 himself, and an all round athlete. Originator and patentee of the Titus Progressive and Automatic Exerciser and the Titus System of Physical Culture.

MOST any form of exercise does some good. Naturally some are better than others. Different Physical Culturists use different methods, just as different doctors prescribe different treatments for the same ailment. Personally I believe that the kind of exercising apparatus used has everything to do with the results obtained, and I do not believe that you can build up great muscle without apparatus. If you could, why all the gymnasiums? I have been turning out strong men for twenty-five years, during which time I have perfected and invented the TITUS PROGRESSIVE AND AUTOMATIC EXERCISER that I use in training all my pupils. I do not remember ever having a dissatisfied pupil. On the other hand, I have received thousands of letters from the men I have trained telling me that my System is the best they have ever used. Among my pupils are such well known strong men as Rolandow, the Great Barnes, August Johnson, William D. Waring, Arthur Saxon and many others. I could fill this page with the names of well known strong men who use and endorse my System.

I Am the Only Instructor Who Shows You In Advance the Kind of Apparatus He Uses

I have nothing to conceal from you. My methods are open to everyone. I show you in advance the kind of apparatus I use in training my pupils. On the opposite page you will find two illustrations of the Titus Progressive and Automatic Exerciser in use. You have a right to see what you are going to get for your money before you spend one penny. You wouldn't buy an automobile or a piano or anything else before you saw it, would you? Then why not apply the same good judgment to something as important as a Physical Culture Course? My exerciser has been called by many a "complete home gymnasium," and that is exactly what it is. There is an exerciser for every part of the body, yet the whole outfit is so compact that it takes up scarcely any room. It can be set up instantly anywhere—nothing to fasten to walls or doors, nothing to mar any part of the house.

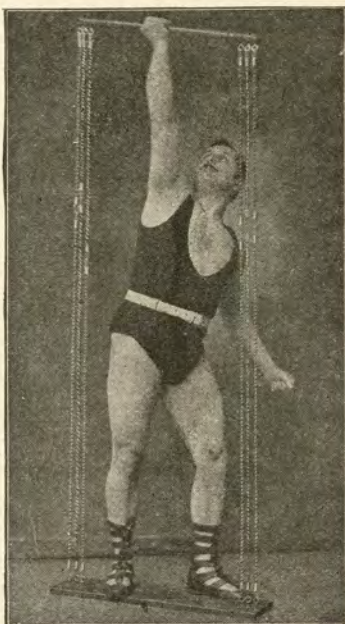
Let the Man Who Has Personally Trained the Greatest Number of REAL Strong Men Train You

In selecting your Physical Culture Instructor, you can do no better than follow the same Course which so many of the world's greatest strong men have used. I have personally trained more of the well known record holders than any one else. You have but to see their photographs and read their endorsements of my System in my big new book to prove that all I say is absolutely true. These men think well enough of my System and Apparatus not only to use it themselves, but they recommend it to everyone seeking real strength. They will tell you that in order to be a *real* strong man you must develop every muscle in your body. Your body is only as strong as its weakest part. And right here is where the value of my System comes in. With the Titus Progressive and Automatic Exerciser

You Can Develop Every Muscle In Your Body to Amazing Proportions

No other apparatus needed; nothing else to buy. It is the most ingenious device ever invented. The whole outfit is

A Physical Culture Course



built on the principle of PROGRESSIVE RESISTANCE. The strength of each exercise can be increased as your muscles grow stronger. Remember this is the same System that all of my famous pupils have used to attain such marvelous muscular development. Also remember that you get the Titus Progressive and Automatic Exerciser complete with my full Course for the price you pay for ordinary courses, some of which include no apparatus at all.

I Want You to Be the Judge

I am not going to ask you to take my word for a single statement I make. Not because I am not sure of what I am talking about, but I want you to read what the world's greatest strong men say about my System in my big new book, "Building Better Bodies." When you read this book and see the many fine photographs of my pupils in it, I am sure that you will select the TITUS SYSTEM, just as so many others have done. You will find my book the greatest of its kind ever published. It is a new edition just off the press, revised and enlarged in every way. It is crammed full of valuable information on Health and Strength. To miss reading this book is to pass up an opportunity you do not get very often. In it you will find a complete description of the Titus Progressive and Automatic Exerciser.

These illustrations show you the TITUS PROGRESSIVE AND AUTOMATIC EXERCISER and how it is used. There is an exerciser for every part of the body. Notice how compact, yet how complete, the whole outfit is. This provides the kind of exercise that not only builds Muscles, but heals and strengthens weak and ailing Vital Organs, improves Circulation, steadies the Nerves, Builds up and gives Tone to the Whole System, imparts Vigor, Snap, Enthusiasm, Joy and Ambition to young and old people alike.

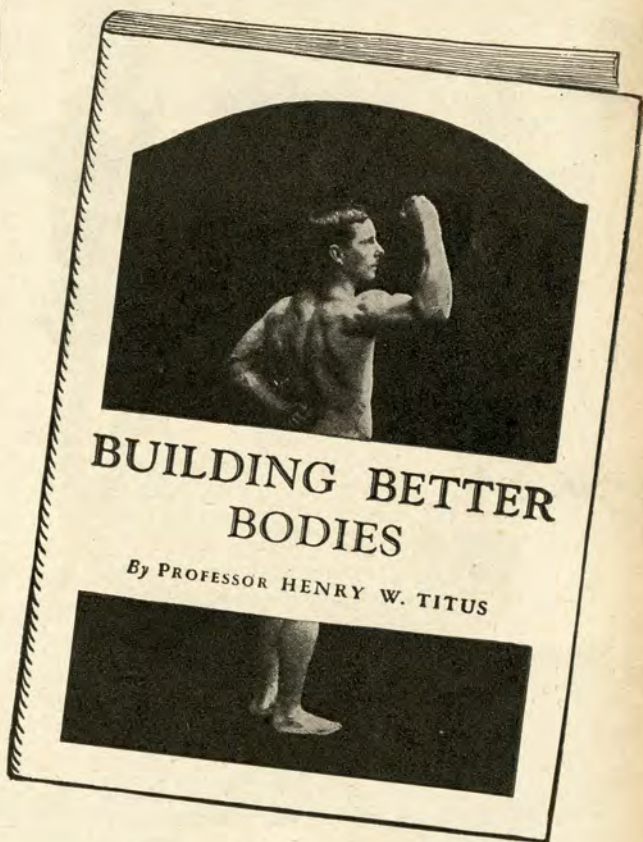
Send NOW for this Big New Book

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

It 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. All of the astonishing and vital discoveries I have made 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. Mail the coupon TODAY.



PROF. HENRY W. TITUS
Dept. 30, 105 East 13th Street, New York City

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

Name.....
Street No.....
City..... State.....

Prof. Henry W. Titus
105 E. 13th St., Dept. 30, New York City



"Come on in—the water's fine."
Photo by H. Armstrong Roberts

Editorial

Getting Back to the "Strenuous Life"

WHAT has become of that once popular "strenuous life" of which the late Theodore Roosevelt was not only the exponent but the very living embodiment?

Our people today are so busy living the jazzy life, the hoochy life, the gluttonous life, the grafting life, the gasoline life, the auto-smashing life, the flapping life, the bandit life, the narcotic life and the altogether extravagant life, that we have almost forgotten the very phrase that expressed the spirit of one of the most active and dynamic of all our Presidents.

Only here and there we find those signs of organic health which take the form of the "athletic life," in which stout-hearted young men and women truly strive to do and to excel. For there are still some of us to whom the conception of human life means effort, and to whom it is clear that the measure of the life that is in us is expressed in terms of our capacity for effort.

Colonel Roosevelt was alive. Jack Dempsey is alive. So are Helen Wills, Babe Ruth, Joie Ray, Charley Paddock, "Doug" Fairbanks, Josef Hofmann, Mussolini and Alfred McCann.

But what are we to say of those smug, self-satisfied folks who side-step real exertion, who try to solve their problems by dodging them, who seek out the easy places and grow soft in their self-indulgence and stagnation? Are they alive? No one can call them so. Then, what are they?

Life means nothing unless it means a force that is active and eager, a force that represents energy and strength, a force capable of intensity of effort. There is no life without activity. There is no life without strength. There is no strength without effort, and no effort without strength.

* * * * *

There is an old saying which has been very popular as a motto for high-school graduating classes, "Nothing without Work!" It expresses a big truth, even though it sometimes strikes one as unhappily couched in the choice of the word "work," against which there is a con-

siderable prejudice as having the suggestion of irksome and monotonous drudgery instead of the notion of inspired and constructive activity. Work has too much of the flavor of duty and necessity rather than of privilege and service.

I have no idea where this old epigram originally came from. Probably some old saying to the same effect could be found in every language under the sun, as the common product of human experience. But what is really meant by the phrase is "Nothing without Effort." There is a quality of eagerness in the very meaning of effort; it expresses joy, ambition and energy.

* * * * *

The Olympic Games, being held again this year, beautifully express the spirit of the strenuous life. The Olympic Games are more popular, more widely participated in and more stubbornly contested, than ever. Life is here expressed in terms of sport. But the nature of effort here or elsewhere is the same. Our sports as crystallized in the world-wide competition of the Olympic Games, serve as a background for mature human life. They present a standard of achievement, a standard of endeavor which is likely to be carried over into the more serious business of human affairs. The lessons of thorough preparedness through assiduous training, of teamwork, of rigid self-discipline, of sand and grit and endurance, of almost super-human effort, and above all the ideal of strength, mental, moral and physical, as expressed through all of these, are exactly those lessons which make men of our boys. No one, without having learned these lessons, is educated in the best sense.

* * * * *

Do we ever do anything as well as it can be done?

The people who do so are the champions. The least we can do is to try to do what we have to do as well as we can.

Even the champions sometimes do not do their stuff as well as it can be done. And that is why they lose their championships.

WHY Do Track Athletes Break Down?

Will Our Olympic Team
Again Suffer As In 1920?
—The Diplomatic Value
of International Contests

By *Walter Camp*



P. & A. Photos

This photograph, more than any other that we have seen, carries Walter Camp's personality.

THOSE who were following with closest interest this country's prospects for the Olympic Games were recently quite shocked by the report of breakdowns in the case of one or two of our most important contenders. The writer predicted freely in 1920 that we should have these breakdowns. And they came then and to such an extent as to astound every one in this country. They were quite largely confined at Antwerp to the Americans. But this year there is a report that Nurmi, the celebrated Finnish runner, has suffered. To the student of sport who is particularly interested in physical health and efficiency, the occurrence of such breakdowns opens a new field for consideration. Nations, our own included, are looking upon these Olympic games with approving but with critical eye. They are studying them in relation to the question of a nation's man-strength in health and efficiency. They are concerned not alone with the immediate loss of points or victory in the individual contests, but as to the value to the country in efficiency in peace and efficiency in war.

Some have already contended that if the trained athlete has not been made fit for the ordinary wear and tear of life or his availability for military service has not been raised, of what profit is the training? If when these picked men are made ready for their effort they must have every condition of track and weather made favorable or their muscles or tendons give out, what have we really accomplished? If the ordinary man can run across a ploughed field in the wet and mud and arrive on the other side sound, while the trained athlete pulls a tendon and has to be carried across, that we certainly are not on the right track is a fair contention. If the trained athlete becomes such a delicate piece of machinery that he can only perform under conditions far from normal in everyday life, of what value is the machine we have made? Are we making prodigies at

the expense of efficiency? Such questions must inevitably arise.

One theory is that our better records, involving a greater effort and therefore greater strain, make us more likely to have strained tendons and other breakdowns than formerly. To illustrate: Suppose that grandfather ran the hundred yards in eleven seconds. If I run it in ten seconds, am I more likely to break something than he was? Do I have more strain in the race and in the training efforts? Are men who run under ten seconds even more likely to strain themselves? The boy who used to run the half mile in 2:05 or 2:10 did not break down as the man now running it in 1:53 or 1:55. Pole-vaulting thirteen feet may damage more tendons than vaulting eleven. The nearer one comes to the ultimate human possibility, the greater may be the strain and the more likelihood of some part giving way. Is this the explanation or is it only a part of the explanation?

Another theory is that length of time in competition has much to do with it. Paddock was doing ten seconds in the hundred yards even when he was fifteen; in other words, he has been doing the best kind of sprinting for eight years. He is now twenty-three. The question arises, Is he twice as likely to damage a tendon now after eight years of running than he was after four years of running?

How long do tendons and muscles keep their youth? Can we assume that they have—not a lifetime—but a "youthtime"? And that after several years of training and competition they show the effect of the strain in a manner that is cumulative? That up to a certain point the result of training and effort is to build strength and toughness of the tissues until a normal maximum is reached, and that beyond that point continued effort and strain gradually wear out the tissues until they become susceptible to a break of some kind? That instead of getting tougher with the years there comes a time when

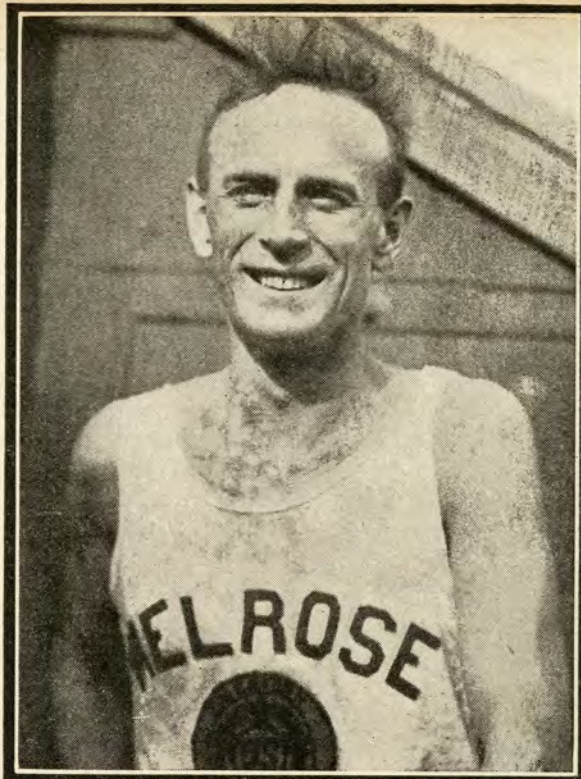
they very slightly weaken? That perhaps they get "old" in a competitive sense, this being a matter about which the non-athletic man is unconcerned just because he never puts himself to any test?

And if this is so, is there any means by which one can offset any such tendency? Or may we assume it as inevitable that the farther a man goes the more likely he is, with the same type of effort and the same degree of strain, to overtax some part?

The Larger Values of International Contests

"For there is neither East nor West, Border, nor Breed nor Birth: When two strong men stand face to face Though they come from the ends of the earth."

I well remember the first international contest I ever witnessed, and my feelings upon that occasion. It was at New Haven, and I was just a Prep. School boy, but

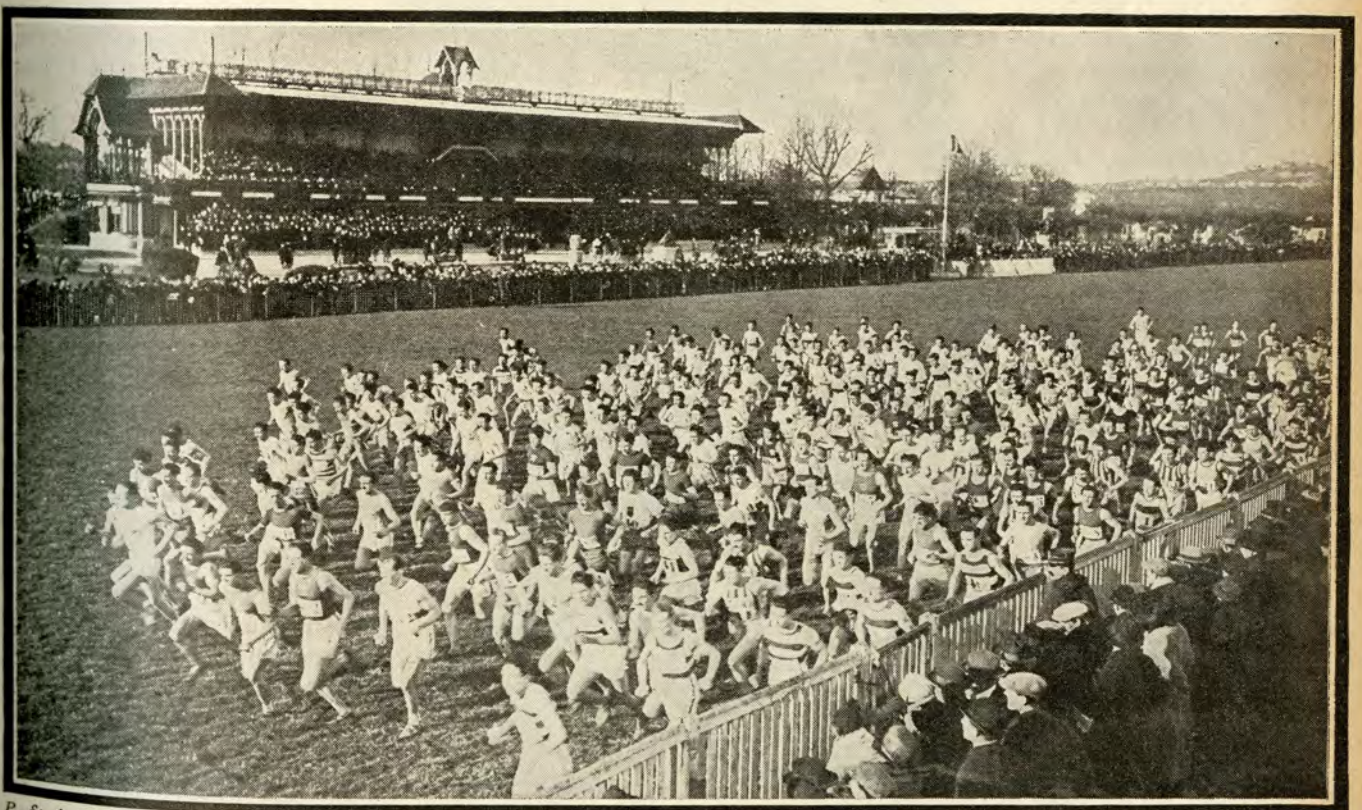


International

Apparently distance runners break down less frequently than others. For instance, this marvelous athlete, Clarence De Mar, at the age of thirty-six, recently created a new world's record of 2 hours, 29 minutes, 40 1/5 seconds for the full Marathon distance, 26 miles, 385 yards, winning the Boston Marathon the fourth time in succession.

filled with quivering excitement and national pride when at Hamilton Park I stood with a crowd of spectators and saw the kick-off of a football game between teams from Eton, England, and from Yale. The Etonians were graduates while the Yale team was of undergraduates, but they were fairly matched in age. There was a "Lord" on the Eton team and there was a giant of some six feet six inches, and how that giant could kick! The game was most interesting, the Englishmen outkicking Yale, but nevertheless the greater abandon and spirit of the Blue told in the end, and Yale won two goals to one. I went to the theater that night and saw the Englishmen in a box.

But while this was my first personal experience in seeing an international contest, there had been several international encounters in other sports many years before. Probably the most notable and earliest were yacht races. August 3, 1870, the first race was sailed for the America's Cup, and some twenty-three yachts



P. & A. Photos

As an index of the interest in track and field sports in France, this picture of the start of the recent French cross country championship speaks eloquently. The athletic spirit has swept all Europe in greater or less measure.



Keystone

Howard B. Hoffman, Ludington, Michigan, will try to show the Finns and the rest of the world how to throw the javelin at the Olympic Games. He was last year's National A. A. U. champion.

crossed the starting line. Britain's representative was the *Cambria*, and no less than eight yachts defeated her, the winner being the *Magic*. Then followed years of international competition for the America's Cup, the winners being year after year American boats, the *Columbia*, the *Sappho*, the *Madeleine*, the *Mischief*, *Puritan*, *Mayflower*, *Volunteer*, *Vigilant*, *Defender*, *Columbia*, *Reliance* and so on, a long tale of American successes. The list was marred by the Dunraven incident, which embittered the two countries for a time. But even before these races for the America's Cup, there were international contests which ultimately gave rise to the America's Cup races. The first of these was originated by J. C. Stevens of the New York Yacht Club, who determined to race for America in the race for the Queen's Cup at Cowes in 1851. Stevens commissioned an Englishman, residing in New York, George Steers, to build him a schooner yacht for this purpose. But when Stevens

took her over he found that there was a time allowance in the provision for the Queen's Cup, and so did not race. But he did enter in the contest for a cup put up by the Royal Yacht Squadron, where he defeated fourteen other yachts, thus establishing the first instance of international yacht racing for America.

Columbia sent a crew, four-oared, over to victory at Henley. The Schoewaeacemettes, an Athletic Club crew, also went over, but after winning a heat were obliged to scratch the next day on account of a sick man in the boat. Harvard essayed a 'varsity race with Oxford, but were defeated. Cornell, Yale and Penn each tried the Henley, only to meet defeat. And then in 1914 Harvard sent another eight-oared crew over for the classic Grand Challenge Cup. Boston sent a crew at the same time, and those two American crews had the honor of rowing the final after knocking out all British competition, the Harvard crew winning on the 4th of July!

In track athletics



International

Great interest in weight throwing is prevalent throughout the British Isles, the original home of this form of sport. Here is M. C. Mokes, the A. A. A. champion, throwing the hammer.

combined teams of Harvard and Yale have competed with British combined teams of Oxford and Cambridge in close contests ever since, while London Athletic

Club and New York Athletic Club met in New York with an overwhelming victory for the latter.

The Penn Relays have brought together British and American runners, and in the relay races the Britishers have had a bit the better of it. The French tried it also, but failed. This year a Cambridge team is coming, and there is a chance of an Australian team.

But the international contests with which the public is most familiar outside the occasional polo matches are the tennis, golf and the Olympic Games.

The Davis Cup matches have brought together a large group of nations—England, France, Australia and Japan being the most prominent. At present we hold not only the Davis Cup, but the world championship. In golf Walter Travis stands as our only



Wide World Photos

The "Penn Relays," held annually at Franklin Field, University of Pennsylvania, have in recent years taken on an international flavor, with many British athletes participating. This photo shows the star Scotch sprinter, Eric Liddell, at the left, running second to Louis A. Clarke, Johns Hopkins University, in the special international 220-yard dash.

amateur who has succeeded in winning the British Amateur Championship. But we are still trying. Ouimet won the Open here some years ago against Britain's best at Brookline, and Jock Hutchison was our first player to win the British Open.

But the Olympic Games are the great melting pot after all, and there we have in track and field athletics a long lead in victories, for we have had the men and the money; we have specialized to a far higher standard of efficiency, and although the foreign nations are now on the road to improvement in knowledge of training methods, we still seem to have the ascendancy.

What does it all mean and what lessons have we learned, and what further knowledge should we accumulate from this attrition with other races in the matter of sports?

For after all the answers to these questions are the important matter, and not the mere record of defeats or victories. How far are the nations cemented by this interchange of ideas in the sport field? And how far are we to benefit in health, strength and efficiency from contacts of this kind?

At the time of the last Olympics in 1920 there were many things provocative of disturbing thoughts to the student of international affairs. Shortly after the games we were landed in what looked to be a very pretty

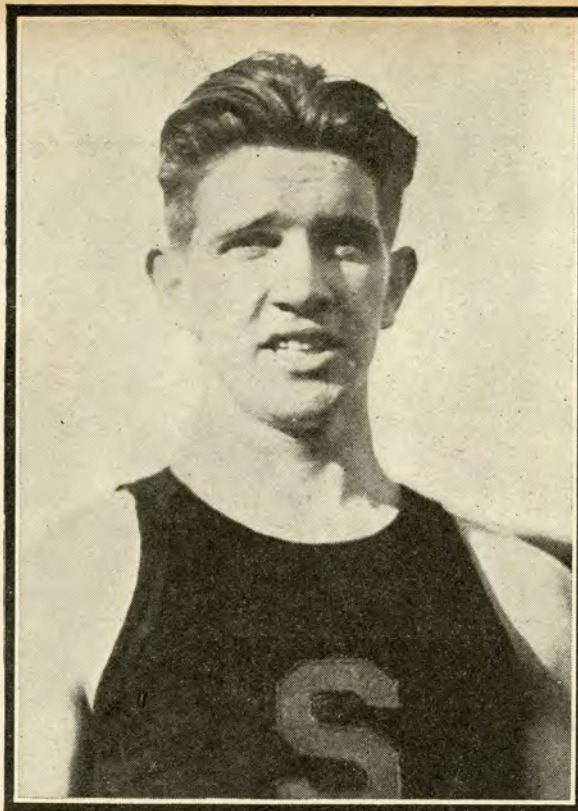
quarrel over the Olympic report. Baron de Coubertin, the President of the International Olympic Committee, went so far as to request the appointment of an International Sub-Committee to go over the published report of the American Olympic Committee and to point out and rectify not only the alleged errors in it but also what he termed "*the wilfully misleading insinuations.*"

Without at the moment taking up the merits of the report and the Baron's drastic action, it is worth while for us to consider some of the broader phases of such a schism as this. Viewed in the light of the purpose of the resurrection of these Olympic Games, the quarrels that have emanated from them would make even a cynic laugh. In the original Greek Olympic Games peace was a great factor. In fact, a general armistice was declared throughout Greece of all warring factions and parties previous to and during the Olympic Games, no matter what was transpiring in the way of military or warlike operations. In the Baron's own plans for the revival of the Olympic Games, the chief and main statement was to promote friendship between the nations. And yet with all this as a basis there has hardly been a set of games held without friction, and sometimes so extreme as to really affect the national feeling. After the Halswell-Carpenter incident in England, one could not meet a Britisher in any class, high or low, club or street,

without incurring a feeling and a reception almost as extreme as though the two countries had been at war. As a matter of fact, also, our Committee here printed quite a brochure upon the situation, which even added fuel to the flame. It is hardly necessary to go into other smouldering troubles arising constantly, and which really have at times endangered the continuation of the games. Whatever may be the merits of all these controversies, there is one thing we must face, and face squarely, and that is that we are not in control, nor likely to be in control of an International Olympic Committee, and hence what we secure from them in the way of concessions must be secured through the medium of persuasion.

This brings us to the point of wondering just what all the other nations think of us. Diplomacy, the world believes, is more highly developed among the continental nations than in the United States, and when one does not control in voting numbers diplomacy is necessary, as we all know. Perhaps a good illustration of this is the fact that the 1924 games were awarded by the International Committee to Paris, and the 1928 games to Amsterdam, in spite of the American representatives' proposal to the Congress to hold the 1924 games in Los Angeles should Paris not be available, or in case the 1924 games went to Paris, that the 1928 Olympics should be held in Los Angeles.

This particular report, which is now



P. & A. Photos

A promising Olympic contender in the sprints is Chet Bowman, Syracuse star, who won the "International Hundred" at the Penn. Relay Carnival in even time, but was later caught in 9 4/5 for the hundred in a joint meet with the University of Virginia.

Olympic games, and the best way to carry out that purpose. It certainly never can be accomplished by friction,



International

And here is the American Olympic Committee, Major W. C. Rose, U. S. Army; F. W. Rubien, Secretary of the Olympic Committee, and Col. Robert M. Thompson, President of the Olympic Committee, inspecting the S. S. America, selected to carry the American Olympic Team to Europe.

assailed by Baron de Coubertin, treated upon the 1920 games at Antwerp, and also this later Olympic Conference at Lausanne, which was held last summer, and complained of the treatment accorded to the invitation in Los Angeles. Mr. Kirby, the head of the American Committee, received a dispatch from Geneva stating that this inquiry had been proposed, and in reply to questions on the matter made the statement that the American Delegation to the Lausanne meeting felt that the offer on behalf of Los Angeles had not been treated by the International Committee and President de Coubertin with the respect and courtesy due to such an invitation. There the matter for the present rests until, if Baron de Coubertin has his way, an International Subcommittee will be appointed to take up the recently published report of the American Olympic Committee.

The question still comes back to the purpose of these Olympic games, and the best way to carry out that purpose. It certainly never can be accomplished by friction, nor are the results satisfactory if the games produce enmities. The mass feelings of a race or a nation are strange things to deal with, as the pages of history indicate. It is not always the great political events that bulk largest in the feeling of the individuals in a mass, and many times the apparently less significant undercurrents are the ones which govern.

It is an extremely dangerous business in world politics to stir up racial or
(Continued on page 87)

Hello, Humidity!

Facts and Fallacies About Our Air

The Requirements of Air Movement, Humidity and Temperature Are Perhaps More Important In Any Practical Consideration Than Factors of Oxygen Content and So-called Air Purity

By Paul von Boeckmann

VERY recently a motion picture was shown in New York City showing a number of men and women confined in an air-tight chamber with candles for illuminating purposes. It was shown that as the candles became dim because of low Oxygen, the people showed evidence of discomfort and finally became unconscious from Oxygen starvation. It was a very thrilling scene, but not based upon fact, as I have explained. The writer of the scenario had the usual superficial knowledge of the amount of Oxygen air must contain to sustain life.

To determine the effect of deficient Oxygen and excessive Carbon Dioxide upon the human body and upon animals, many exhaustive experiments have been made. The subjects were placed in an air-tight chamber equipped with elaborate apparatus for determining the condition of the air in the chamber.

I shall cite a series of experiments which give startlingly new data upon the subject—data which will enable even a layman, not learned in the laws of physics and physiology, to draw some important conclusions which will be of great value to him in a practical way.

Six healthy men were placed in an air-tight chamber, with large observation windows. The chamber was equipped with an electric heater, a coil for cooling the air, a humidifier for moistening the air, an electric fan to stir up the air and telephones communicating with the outside.

Test No. 1.—The temperature and humidity were kept unchanged and the fan was operated to circulate the air. The men breathed the air in the chamber over and over again until the Oxygen dropped to 16% and the Carbon Dioxide reached 4%. Not until then did the men begin to feel uncomfortable. So deficient was the Oxygen that a match would not burn and a candle could not be lighted. Careful observation of the pulse rate and breathing of the men failed to show any decided change from normal.

Test No. 2.—With the Oxygen at 16% and Carbon Dioxide at 4%, the fan not running, the temperature was raised to 85 degrees and the humidity to 80%, and further observations were made. It was found that breathing became rapid, pulse rate high, the faces of the men became flushed and wet and they became extremely nervous, unable to remain quiet, and begged for the experiment to cease. The men were permitted to breathe normal air from the outside through tubes, but very little relief was felt after breathing normal air for five minutes.

Then the observers on the outside of the chamber

breathed air from the inside of the chamber through tubes without feeling any discomfort. The fans were then started and immediately the men inside felt great relief, and as soon as the fans were stopped great discomfort was felt, proving that the motion of the air produced some of the changes above mentioned. Then the cooling device was started, and the temperature lowered to 70%. Again great relief was felt, but not as great as when the fans were running. Then the humidity was lowered to 50%. Again a decidedly increased relief was observed. When the fans and cooling devices were both operated, the men felt perfectly comfortable though breathing air containing only 16% Oxygen and 4% Carbon Dioxide, proving that it was not the deficiency in Oxygen or high percentage of Carbon Dioxide that caused these symptoms.

Special experiments have shown that no serious disturbance is caused by the breathing of air containing as low as 10% Oxygen and having not more than 4% Carbon Dioxide. The strange phenomenon was discovered that in the event of breathing air so abnormal, the kidneys and liver come to the rescue and compensate for the lowered amount of Oxygen. It is needless to say that people suffering from derangement of the kidneys or liver cannot withstand very low Oxygen. Therefore, it is necessary that they use due precaution not to live in poorly ventilated rooms.

The tests cited proved conclusively that humidity and air motion have a decided effect upon the delicate nerves of the human skin. These factors, however, are seldom or never considered. Our sanitary laws demand only that the air we breathe have the proper amount of Oxygen and not an excess of Carbon Dioxide. Most books on ventilation and air hygiene also consider these two factors only. It is assumed that so long as the air we breathe contains 18% Oxygen, that is, enough to support the combustion of a burning candle, and less than 1% Carbon Dioxide, it must necessarily be healthful air, provided it contains no other poison.

It will be noted that when the fans in the test chamber were started, the men felt immediate relief, though still breathing what is usually considered "poisonous air." The first impression might be that the relief felt was due to cooling of the bodies through the more rapid evaporation of the moisture on the skin, because of the air motion. To determine whether this could be so, similar tests were made upon animals which do not perspire (sweat). For this test, mice were used. It was found that when mice were placed in an air-tight chamber of a certain size, they died in about (*Continued on page 82*)

Growth and Strength Through FOOD

Give Your Children a Fair Chance—Our Vicious
Methods of Food Preparation Waste Not Merely
Good Food, but Growth and Health and Life As Well

By Alfred W. McCann

INDIVIDUALS who are brought to their senses through illness and who, therefore, begin to substitute thoughtful consideration for careless indifference in all matters relating to health, find little difficulty in grasping the full significance of the value of natural foods.

By the phrase "natural foods" they learn that what is meant is nothing more than foods containing the mineral salts with which nature herself endows them.

Individuals whose interest in "natural foods" has not been aroused through pain or physical infirmity are prone to go on in their neglect of the importance of the phrase, and of the still greater importance of applying its significance to the selection of their daily diet.

They frequently see in print the assertion that "no one need bother about the mineral salts of food for the reason that everybody gets all the mineral salts that have ever been needed or ever will be needed from ordinary food and water."

Such assertions are sometimes fortified by references to laboratory experiments in which it is shown that no matter what kind of food is consumed, mineral salts are thrown off in the waste products of the body, thus "proving" that the quantity taken into the body even in the consumption of refined food is actually more than the body needs, otherwise mineral salts wouldn't be thrown off by the body at all.

The absurdity of these conclusions, and the dangerous results that follow in the wake of the misleading principles to which they give rise, ought to arouse the indignation of physicians and hospital authorities all over the world.

The worthlessness of the experiments upon which such conclusions are founded is indicated by the fact that they are intended to demonstrate the difference between the absorption by the body of phosphorus, iron and calcium salts from genuine whole grain bread, and the absorption of the same mineral salts from the same quantity of refined white flour bread.

The experimenters collect the waste matter thrown off by the body during a white flour diet and show in it the presence of mineral salts.

"Now you see," they assert, "that these mineral salts would not be present if the body could have used them all up. The very fact that they have been rejected and thrown off by the body indicates that, however necessary they may be to the maintenance of health, they nevertheless are found even in refined food in larger quantity than the body actually needs.

"For this reason," they conclude, "it is quite positive that refined foods, however sifted, bolted or exhausted

with respect to the quantity of mineral salts found in them before such treatment, are capable of furnishing all the mineral salts that health demands."

The stupidity of this conclusion should be obvious even to the most thoughtless.

Mineral salts do appear in the waste matter thrown off by the body during a refined food diet, not because they are not required by the body, but because the work that nature intended them to perform has been performed.

Even in starvation mineral salts are thrown off by the body. In tuberculosis more calcium is found in the body's waste than is consumed in the food, showing that the body is actually draining its own resources in its search for this essential mineral.

Any child can understand the fact that the captain, mate, engineer and crew all get off the ship at the completion of its voyage. Certainly the act of disembarking does not mean that their services were not essential to the movement of the vessel during its voyage.

Many experimenters have succeeded in establishing the folly of the absurd conclusions to the contrary, and men and women in search of health should never lose sight of the fact that although references to the truth rarely appear in popular literature, the truth is none the less a conclusive matter of record.

Bunge, for instance, has demonstrated the value of the mineral salts of the bran of wheat in promoting the growth of young animals, as compared with the deficiency of refined white bread in this respect. Bunge's experiments have been repeated in New York City during the last two years fully a hundred times.

Whether two and two be added at Coney Island or at the North Pole, the results are always the same. What Bunge demonstrated as professor of physiological chemistry at Bâle University is just as true in Hoboken or Sioux City as it has always been true throughout the world and always will be.

He divided eight young albino rats of the same litter and approximately of the same size, as measured by their weight in grams, into two groups of four rats each. One group was fed on white bread, the mineral-salt content of which had been reduced to

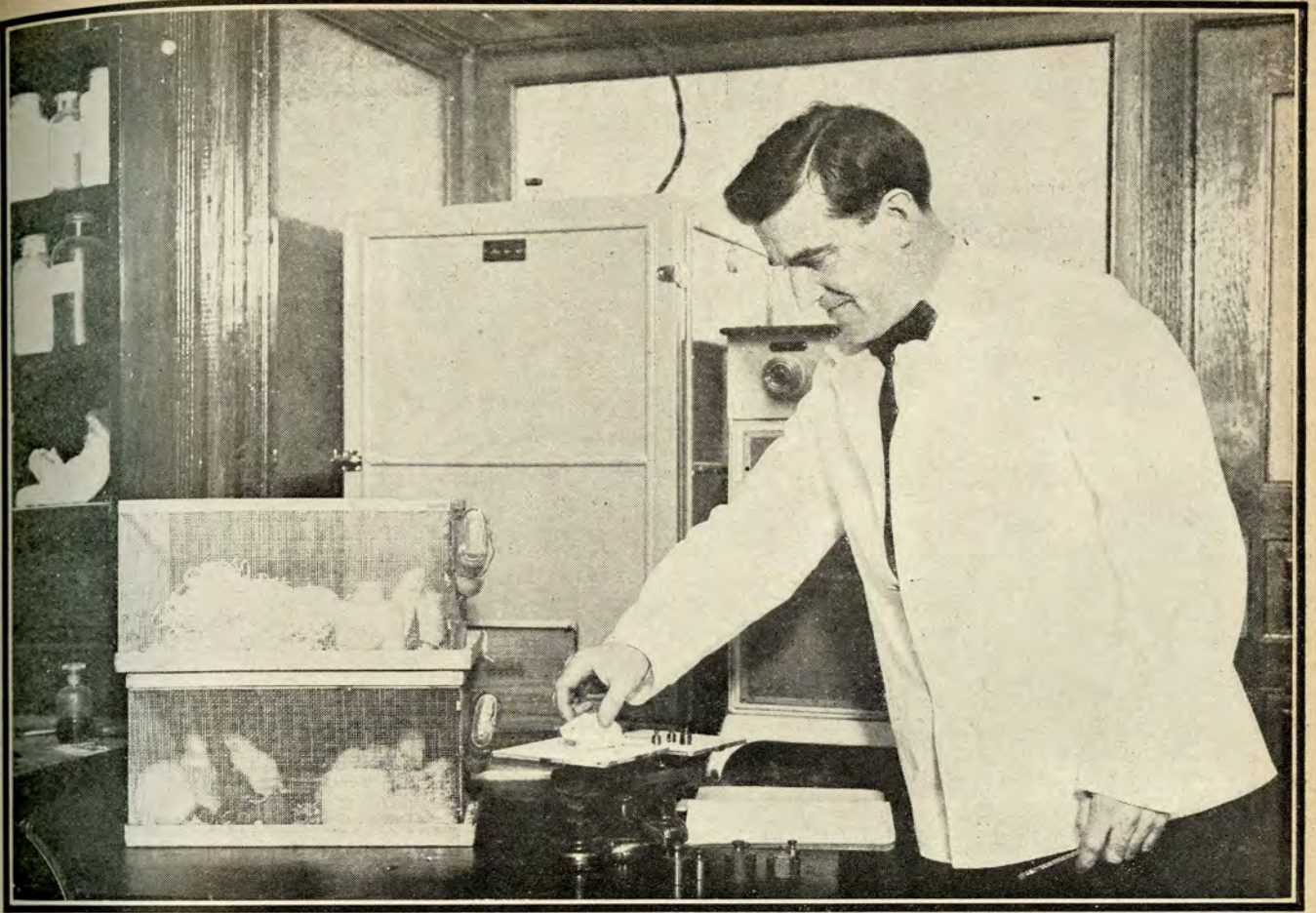
0.0015 per cent. iron

0.045 per cent. calcium

0.28 per cent. phosphorus.

These mineral salts derived from the refined white bread consumed by the rats were found in the waste thrown off by them. The other group was fed on whole wheat bread which contained

0.0055 per cent. iron



Alfred W. McCann in his elaborate consulting food laboratory, equipped to enable him to find out anything that any one may want to know about any kind of food. Much can be definitely proven by the relative growth, weight and condition of the little white rats upon different experimental diets.

0.077 per cent. calcium

0.90 per cent. phosphorus.

If you will take a second look at the two groups of figures noted above you will observe that the rats fed on the whole wheat bread found in their diet nearly four times as much iron as was found by the white bread rats, nearly twice as much calcium, and more than three times as much phosphorus.

The rats that ate the whole wheat bread were not only more lively than those fed on the white bread, but they grew more rapidly.

Their blood at the end of the experiment contained a larger quantity and a higher percentage of hemoglobin. In other words, not only was their blood richer in hemoglobin, but it was of better quality.

Hemoglobin is the red coloring matter of the blood, the lack of which is described as anemia.

It was quite clear to Bunge, and to everybody else who has followed his experiments, that the tissue-sweetening and growth-promoting properties of the outer layers of the whole wheat were utilized by the rats in the production of bone, muscle and blood.

It was also quite clear that the rats fed on the whole wheat bread which contained all of the wheat were much better nourished than those fed on the white bread from which three-fourths of the original mineral salts are sifted and bolted out.

It will be remembered that at the beginning of the experiment all the rats were equally well-nourished. The loss of the mineral salts and of the vitamins with

which the mineral salts are always associated in natural food was of such great importance to the rats, as it is of great importance to guinea pigs, rabbits, pigeons, chickens, monkeys and human beings, that its evil results were conspicuous in less than three weeks from the beginning of the experiment.

Yet the sophists persist in saying: "We are still convinced that because the rats discarded mineral salts in the daily waste excreted by them during a white bread diet there were, therefore, more mineral salts present in the white bread than the rats really needed."

How about their health? How about their growth? They evidently needed more health and more growth than they got. They certainly needed more health and more growth than the white bread gave them.

What did the whole wheat bread contain that was missing in the white bread? Go back to those two tables of figures referred to above, and you will see what the whole wheat bread contained.

There is no mystery about this; no hocus pocus. The elements sifted and bolted out of the white bread were not sifted and bolted out of the whole wheat bread. In the case of the white bread the sifting and bolting wasn't confined to the bread. The health and growth were sifted and bolted out of the rats.

Not so with the whole wheat bread, from which nothing was bolted and sifted. The iron, calcium and phosphorus were left in. The health and growth of the rats were not disturbed. Other experiments, carried further along than Bunge (*Continued on page 95*)

Girl Scouting

—A Cure for “Flapping”

Have You Ever Seen a “Changed Girl?”—Here Is the Story of Willa Stevens, Who Once Thought She Was a Smart and Hard-boiled Flapper—and What the Athletic, Outdoor Life and Womanly Ideals of the Girl Scouts Did for Her

By Alice Mary Kimball



WILLA STEVENS wasn't her real name, but it will do as well as any other to hide the identity of the irritating little minx. Minx! That word exactly describes her as she was, two summers ago, when I visited her parents in their suburban home near New York City.

What—oh, what—was to be done about sixteen-year-old Willa?

Something, I earnestly hoped; for poor Mrs. Stevens was on the edge of a nerve-smash.

She nagged Willa.

She nagged Papa Stevens to discipline Willa.

She nagged herself for not having spanked Willa sufficiently when the child was young and the spanking was good.

Willa was a flapper—and proud of it. Hadn't she read about flappers in the papers? And wasn't it clever and reckless and modern to be one?

She sailed triumphantly under the flag of the mad, bad, glad younger generation. She toiled at shocking the neighbors as exploited child laborers toil at their looms.

Back talk was her middle name.

If she had to cook, if she was deprived of her daily box of chocolates, if she was to be defrauded of late dances and motor car parties, why, then she'd run away! So there! Or she'd jump in the river.

She was rapidly bringing her family into line. They'd take orders soon from sheer exhaustion; for her energy and resourcefulness seemed endless.

When Mrs. Stevens found a little heap of cigarette stubs in Willa's room, she was filled with astonishment and despair.

“I don't understand it! After the careful bringing up she's had and the good influences that have always surrounded her! It's beyond me.”

So, poor Mrs. Stevens weeping into her pocket handkerchief. So, too, she gasped and mourned when her young hopeful boasted of drinking a cocktail at a friend's house, or monopolized the telephone all the



Willa found that to be a girl scout leader you had to be an all-around outdoor girl. You had to be—well, not so much good as good for something.

morning talking foolish things to her various beaux.

Willa at the age of ten or twelve! The airy, subtly-colored quality of a water-color sketch! It had been good to look at her delicately-etched features, her fresh complexion, and her greeny-blue sea-colored eyes.

The individuality which had set Willa apart from the billions of other humans on this planet was now completely ironed out. So far as looks went, at any rate. She had, like mobs of other smart young women, pencilled eyebrows. The natural tint and texture of the skin had been lost for the usual drug store enamel. Her mouth was reddened with a lipstick. If Willa had her way, it looked like a blob of cherry preserves spilled on a white table cloth.

Just such blobs adorned the mouths of other girls in Willa's set. They wore, too, silk stockings of identical degrees of transparency; and they presented to the world an unbroken front of teetery, high-heeled pumps.

Oscar Wilde once wrote a witty essay to prove that life copies art. Looking at Willa and her crowd I often wondered if the cosmic scheme was humping itself to make over womankind in the image of a Harrison Fisher poster. Or of magazine covers at their jazziest and most vacuous.

"Why do you hate your home so?" I asked Willa.

"Home!" she exploded fiercely, "is a place where you get bossed around! It's a place where everybody pries into your business and won't let you have a moment's peace! Mother, father, Dick, and everybody! They

have a perfect craze for always telling me what to do."

"You might be, mightn't you," I volunteered, "a little more tactful with your mother?"

"Oh, I try. Honestly. But she sets me on edge, always fussing and bothering. When I hear her coming up the stairs, I want to *scream*."

"What do you really want?" I pursued her. "Suppose now a fairy godmother gave you three wishes?"

"I'd wish to grow up as different as possible from my mother—and my aunts—and my narrow-minded old school teachers," she sang out. "I want a good time. I want to find out about life. I shall, too. I don't care what they say."

She was sitting in the porch swing. The wind was blowing her smartly bobbed hair. In her lap was a pile of magazines—nearly all of the lurid "confession" group which print sex fiction under the guise of "real life" stories. She was reading them, poor dear, to "find out what life really is." For the same reason she danced cheek to cheek with callow youths (here life was imitating the art of the collar advertisements and cigarette billboards), whizzed about in motor cars late at night, and smoked like Vesuvius.

That, and the fact that her distracted mother thought smoking immoral. The child was burning up tobacco, not because she liked it, but out of a kind of inverted moral principle. It was one dramatic way of being altogether different from the mother who nagged her and bossed her.

"I'm sure she's being influenced in some way that I know nothing about," Mrs. Stevens lamented.

No. It wasn't that. Willa was a natural leader, not a tagger-on. Mentally she was precocious. She barely squeaked through at school and she often missed her music lessons. This didn't prove to me that she was stupid. She used brains and vitality setting the pace

for her set. A black sheep—yes!—but a pretty, magnetic, forceful black sheep. The whiter sheep were glad to let her bell-wether the flock.

"If you could treat Willa less like a child," I suggested timidly to Mrs. Stevens.

"Am I to stand by helpless and let her drink and run around late at nights with men older than herself?"

No, that couldn't be done, either. It was a puzzle. I couldn't think off-hand of any way out.

So far as real experience went, Willa was a naive little girl, but she had a veneer of sophistication, a precocious development that girls of my generation didn't have. Moving pictures, automobiles, popular magazines, telephones, radios, jazz had perhaps stimulated a quick hot-house growth. The Stevens home, I had to admit, was badly equipped to interest this restless, romantic young creature. Washing dishes, learning to cook, and reading library books wasn't enough. And Willa had the determination of all modern women to be a part of the



Nobody bossed. Not a knock, nor a frown, nor a word of unwanted advice. If you didn't know how to buck up wood for fuel, if you hadn't an idea how to cook a balanced meal, if you didn't see what had to be done to a lantern to make it burn cleanly and nicely, you could ask. If the elders didn't make a fuss over neglected tasks, the laws of nature—including human nature—did. Incidentally Willa was getting education along many other lines.



human drama, not a pale spectator on the outskirts. She wanted to live intensely. She didn't intend to be bored.

To save Mrs. Stevens from the sanitarium, Mr. Stevens packed Willa off for a summer trip. A young college woman, a friend of the family, was paid a salary to take charge of the out-of-hand daughter.

When Willa came back, her own mother hardly knew her. There she stood on the station plat-

form, a healthy, natural girl with a clear complexion, a sun-browned face, and calm eyes—the child Willa grown to lovely young womanhood. It was unbelievable. No made-up eyebrows. No rouge. No mahogany-colored stains between the first and second fingers of the right hand.

Under the influence of her adopted big sister, who was by vocation a camp leader, Willa had joined the Girl Scouts. She had spent the summer at a scout camp.

How adventurous it had been! Willa was full of stories of her exciting experiences. She had learned to swim. She could do ten miles on a trail without tiring. She knew how to build a fire and cook a camp supper. Boys! Oh, yes! Wonderful memories she had of joint hikes of boy and girl scouts under the leadership of camp counselors. There had been comradeship in work and play, a sharing of jokes, swims, and breakfast-getting. On one hike the girls had made the fires just for a change, and the boys had washed the dishes.

Why hadn't Willa rebelled under camp discipline? Of course, I knew, there must have been discipline. When more than a hundred girls are living away from their homes under primitive conditions, rules must be made and order kept. Somebody must boss.

"How about it?" I asked Willa. "Did the camp run by itself? Was there no grown-up around giving orders?"

"No," she replied, "we weren't treated like babies. The Girl Scouts ran the camp. We did our own bossing."

"How was that?"

"Well, there were more than a hundred girls in camp, but they were divided into families of nine; eight Scouts and a camp counselor—and each family had a wee little gypsy camp all by its lonesome, way out of sight and hearing of the other camps. The family—'patrol,' we call it in Scout language—ran its own affairs, believe me! We voted and decided things."

"What things?"

"How we should do the work and what we should do for fun. Every family cooked its own meals and planned its own day."

As Willa talked on, I got a clear picture of her summer's experience.

When she arrived at the Scout camp on a bus, she said, she thought at first she had come to the wrong place. It didn't look like a camp. It looked like a farm. There was a farmhouse, set down in the midst of green hills, with an orchard in the back and the shadows of great trees making lacework on the lawn. She saw no tent colony, no big mess tent, no crowds of girls being herded about.



No pink complexion bought from a drug store would go; no flabby, useless muscles, nor ladylike incompetence. Being a crack swimmer—that would make them take notice.

A half-dozen girls, each in a middy blouse and bloomers, came swinging down a fern-fringed path. They met the bus and introduced themselves to Willa. They were members of her patrol, it seemed, and they were having a gorgeous time making camp. They were sawing wood and splitting kindling and pounding nails and setting up tents. No grown-up was allowed to have anything to say about it.

As they escorted Willa to the place where the camp was to be, they talked. The farmhouse, they explained, was used as a caretaker's residence and a hospital. Yes, it was equipped with beds and a medicine chest and there was a nurse on the grounds, but it had never been used in four years. The girls were just too healthy. As for the tents, they were scattered in little groups of three all over the camp grounds. Wherever there was a pretty spot, well-drained, with shade and sun, and hills or foliage to act as a screen, a little camp hid out. Some of the camps were on hilltops. One was in a hickory nut grove. One had a cold spring. (Continued on page 86)

Your Back

—The Keystone of Your Strength

How the Back Muscles Are Employed to Accomplish
Extraordinary Feats of Strength—How to Build
Super-strength of the Small of the Back

By Alan Calvert

THE keystone of the arch of a man's strength is the "small" of his back. A man may have wonderful arms and fair legs, but if he is weak in the loins and in the lower part of the back he can never be classed as a really "strong man." Gymnasts and trapeze-performers frequently have wonderful arms and shoulders. Some of these vaudeville-artists who specialize on Roman-ring work are noted for their arm-development. Some of them can take hold of a swinging ring with the right hand and "chin" themselves several times in succession, but almost all of these men have small legs and puny hips. Lightness of weight in the lower half of the body is a positive advantage to a man who earns his living as a professional gymnast, because the smaller and lighter his legs are the easier it is for him to do stunts on a trapeze or a pair of Roman-rings. But put that man in a big packing establishment, where he would be required to carry a half-carcass of beef on one shoulder, or in the line of a varsity football team, and his big arm muscles would be but little good to him.

I mention this because there are some physical-culturists who cling to the idea that "chinning" the horizontal bar and "dipping" on the parallel-bars represent the kind of work which best prepares a man for weight-lifting. According to my experience, it is easier to make a great lifter out of a man who has powerful legs, a strong back and but moderate arms, than a man who has big arms and poor under-pinning. Most ground-tumblers could easily become high-grade strong men, because performing such stunts as turning handsprings, cartwheels and somersaults create far more *bodily* strength than one can get by doing arm-stunts on the horizontal and parallel bars.

I once witnessed a friendly tussle between a tumbler and a gymnast. Both men weighed about the same; the gymnast had 15 inch arms and 20 inch thighs, whereas the tumbler had 14 inch arms and 22½ inch thighs. When they came together the tumbler took hold of the gymnast and ran him backwards across the gym, and then up-ended him and stood him on his head. The tumbler's constant springing, leaping, bending and twisting had given him great strength in the thighs and waist; and *that* is the kind of strength which enables a

THIS most interesting and illuminating article on what is from the standpoint of bodily strength the most important part of the body, was written as a chapter of a new book upon which Mr. Calvert has been engaged up to the time of our going to press. Under unusual pressure, it has been impossible for Mr. Calvert to write the special article which he usually contributes to *STRENGTH* in addition to "The Mat," his regular department, and so we deem it a privilege to be able to publish here this chapter of his new book, since it represents the fruit of the author's life study of these matters, and his ripest conclusions.—
THE EDITOR.

man to push forward against great resistance, and to keep his feet against the onslaught of a powerful opponent.

It may surprise you to know that only a strong-backed man can lift great weights to arms' length above the head. One of the simplest training stunts is to take a bar-bell in both hands and push it several times in succession to arms' length above the head. A man who is accustomed to using bar-bells will do this

quickly and easily, and when he pushes the bell aloft his body will remain erect. Any one who had never used weights, on seeing a lifter raise the bar-bell in this easy fashion, would be apt to exclaim, "My! that chap must have strong arms to be able to push up a heavy weight in that way." If the lifter invited the bystander to try

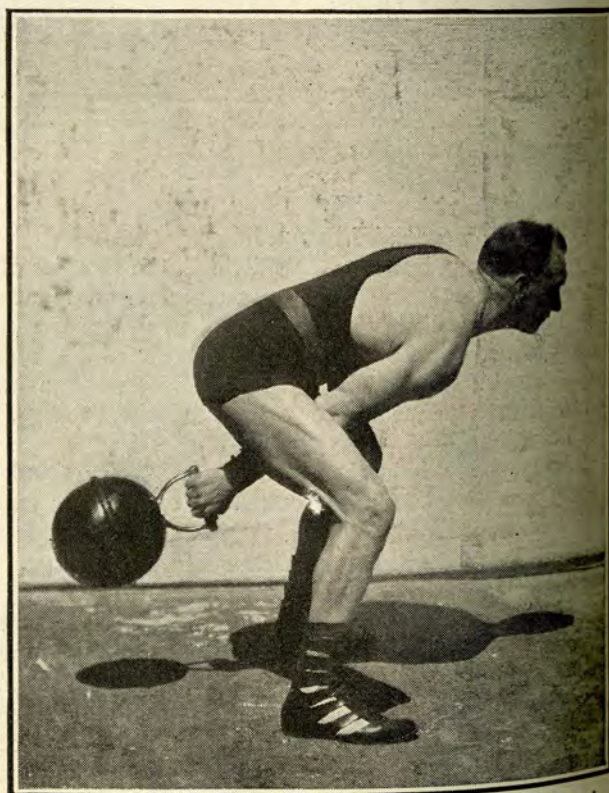


Figure 12. Note the straight, flat back. The exact action of this exercise is important.

to push the bell aloft, here is what would probably happen: In the first place, the novice would have considerable difficulty in raising the 100 pound bell from the floor to the chest on account of the lack of strength in his back, and if he did get it to the shoulder he *might* press it to arms' length, but, as he did so, his body would be bent over backwards at the waist-line, he would have to make a tremendous effort, would get red in the face, and after he had lowered the bell to the ground would probably complain that he had wrenched the small of his back.

The above is not a supposititious case. It is a thing that I have seen happen dozens of times, even when the novice at weight-lifting was a man who had spent months, or even years, at light exercises. I have seen gymnasts with fine upperarms (which they had developed through chinning-the-bar and dipping on the horizontal bars) fail to press aloft a weight so light that it would be a joke to the average lifter. In such cases the gymnast is usually quite puzzled. He knows that his arms are as big as are the lifter's arms, and he thinks that he has failed because he has not the "knack" of lifting, whereas the reason for his failure is merely lack of *back-strength*. Here is one thing that you, who read this book, *must* get firmly fixed in your mind, and that is, when a man is standing on his feet he posi-



Figure 9, illustrating the author's point that maintaining a straight spine and flat back enables one to exert his full power.

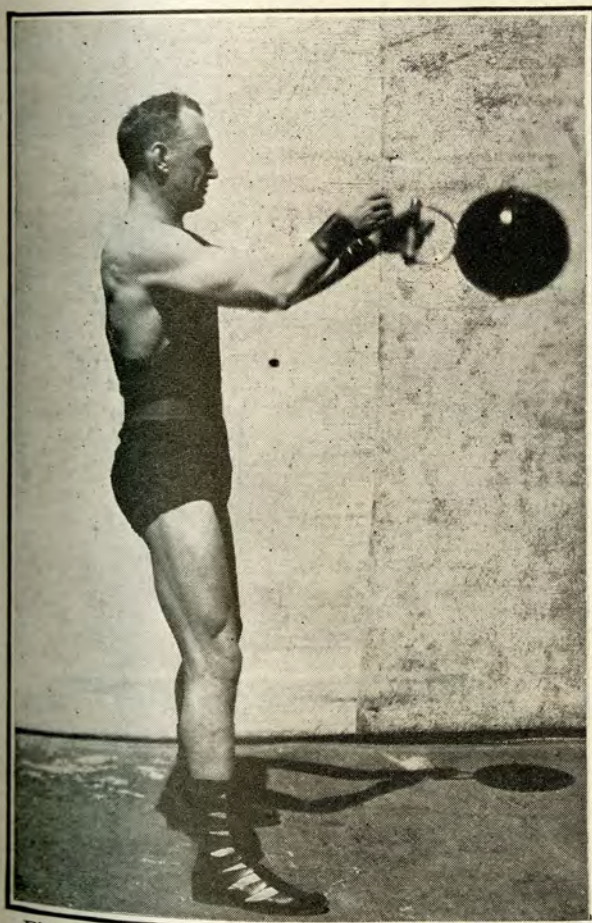


Figure 13. The author's detailed description of the technic of this exercise should be very carefully studied.

tively cannot exert the full strength of his arms *unless the strength of his back and legs is in proportion to the strength of his arms*. I do not mean that the back must be just as strong as the arms, but that it must be *many times stronger*.

I understand that in these college "strength tests," when they wish to get a record of a student's back-strength, they put a leather collar around his neck, have him stand with legs straight, lean forward from the hips, and then attempt to bring his body to the upright position. The collar referred to is a loop of strap attached to a chain, which in turn is attached to some spring registering device. After this test is completed, the student is told to stand with his *body* upright, his legs slightly bent, and then to endeavor to straighten the legs, so as to get a register of his leg-strength.

I find that it is almost impossible to disassociate the strength of the legs and back. In the back test referred to above it might seem to you that in the act of bringing the body to the upright position the student would use only his back muscles, but as a matter of fact he also uses most of the muscles of the haunches and those on the back of the thighs. When you stand with the legs stiff and straight and bend the body over, the hips are the joint which form the hinge. Supposing you wished to hang a very heavy door, you would naturally buy a pair of heavy hinges, but, of course, the leaf of the hinge which fastened to the door would be no thicker or heavier than the leaf which fastened to the door-frame. You would not think of picking out a pair of hinges with leaves of different thickness. Even if the leaf which fastened to the door were a quarter of an inch thick, you would know that the hinge would be no good if the leaf which fastened to the door-frame was made of tin and only one-sixteenth of an inch thick. When you lean over in the manner described and pull against a registering machine, or pick up a heavy weight, your back corresponds to that part of the hinge which is fastened to the door, and your legs to that part which is fastened to the door-frame.

Therefore, unless his legs are powerfully developed, no man can show a high record in a test of back-strength. In fact, as we go along you will become more and more impressed with this *interdependence of the muscles*. You will find that in any feat of super-strength, the athlete who accomplishes it uses as many muscles as possible. The reason that so many strength records were made, and are held, by men who have practiced with weights is because when a man uses weights he is practically compelled to use his muscles in interlocking groups.

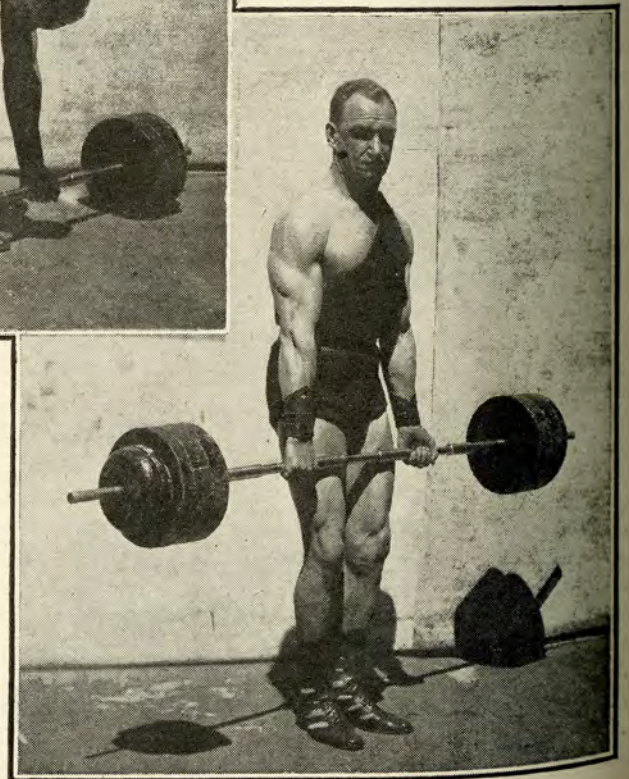
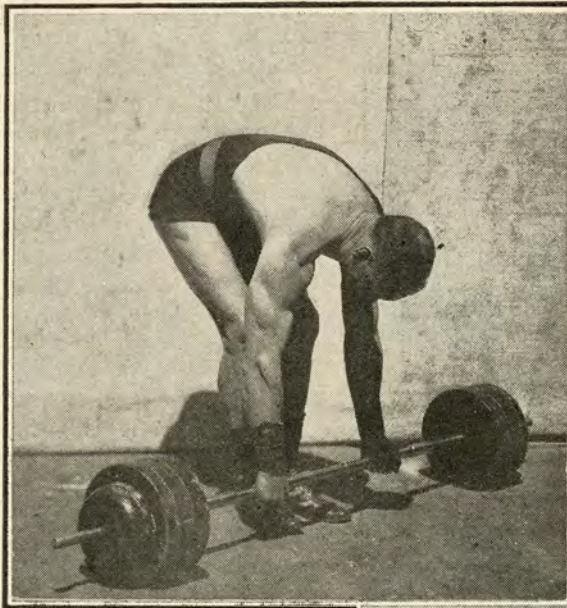
In this chapter, when I refer to the back I particularly mean the muscles in the back which control the action of the spine. On either side of the spine there are long muscles which run all the way from the base of the skull to the hips, and these muscles are called the "erector-spinae"; that is, the muscles which straighten or erect the spine. In the lower half of the back these muscles are plainly visible, and when fully developed they appear like two ship's-cables. If you wish to gauge the strength of a man's back, don't look at his shoulders, but at the *small of his back*, his loins, his haunches and the back of his thighs.

If you were to embark on a program of exercise to improve your body, and if you happened to select some system of light exercise, you would find that there were a great many of those exercises in which you held in each hand a moderate weight and did motions to increase the development of the arms, the shoulders and the muscles on the upper part of the trunk. You would get comparatively *few* exercises for the *lower* part of the back and for the legs; and it is likely that you would be told that merely bending (and doing other movements which compelled you to raise the weight of your own body) would be sufficient to develop the back muscles to their full extent.

Now this is very far from being true. The lower-back muscles are prodigiously powerful when fully developed, and it takes more than raising the weight of your own body to bring out that full development. The simplest of all exercises for developing the muscles which control the spine is the one in which you stand with the legs stiff and straight and then bend the body over by arching the spine, and touch the floor with the tips of your fingers. When you bend over, all you do is to *stretch* the muscles along the spine and the back of the legs. It is *contraction*, and not stretching, which develops muscles, so that these muscles do their real work as your body is raised again to

the upright position. Yet nine men out of ten think that the important part of the exercise is the bending over. (In fact, most people use this exercise to reduce the size of the abdomen.) In order to get any noticeable development of the back it would be necessary to repeat that exercise several hundred times in succession; whereas, if you put a further tax on the back muscles by holding a moderate amount of weight in your hands, you can, by making a couple of dozen repetitions, develop back-muscles of much larger size and very much higher quality.

The beginner of average size should use 20 or 30 pounds, and after he can use that weight without perceptible exertion he should add 5 or 10 pounds more, gradually working up to about 75 pounds. A big man can safely start with 40 or 50 pounds, and can go as high as 100 pounds as an *exercising* weight. This is not a lift or a feat of strength; neither is it the correct way to raise very heavy weights from the ground. It is just an exercise; but by keeping the legs stiff and straight and doing all the bending by arching the spine you can get a remarkable pair of "erector-spinae" muscles. To those of you who have never had a weight in your hands, the idea of "exercising" with a 100 pound weight seems almost fantastic. That is just because you have not even the faintest conception of the possibilities of your own body. To do this exercise with 25 or 30 pounds is no harder than carrying a scuttle of coal up one flight of stairs, and most of you can do that without trouble. Continued practice of the foregoing movement for a few weeks will so develop the back-muscles that you can then use 80 or 100 pounds to exercise, with no more exertion than was necessary when you were using 30 pounds. Further—



Figures 14 and 15. Illustrating an exercise which is almost exclusively a test of the strength of the small of the back. Note that the back is arched in this case, in contrast with the position of the back in Figure 12. It is not possible to lift much in this way because it is a disadvantageous application of the total strength of the body. Read Mr. Calvert's analysis of this point.

As you will learn from a study of this article, it is possible to lift much more by the strength of the powerful muscles of the legs in a nearly erect position than by bending over and lifting only with the small of the back against the great leverage of the body in that position. The photo at the left illustrates a harness lift done with the platform apparatus built by Mr. Calvert. Figures 16 (below) and 17 (at the right) illustrate the "hand-and-thigh" lift described by Mr. Calvert, enabling one to lift far more than with the hands alone.

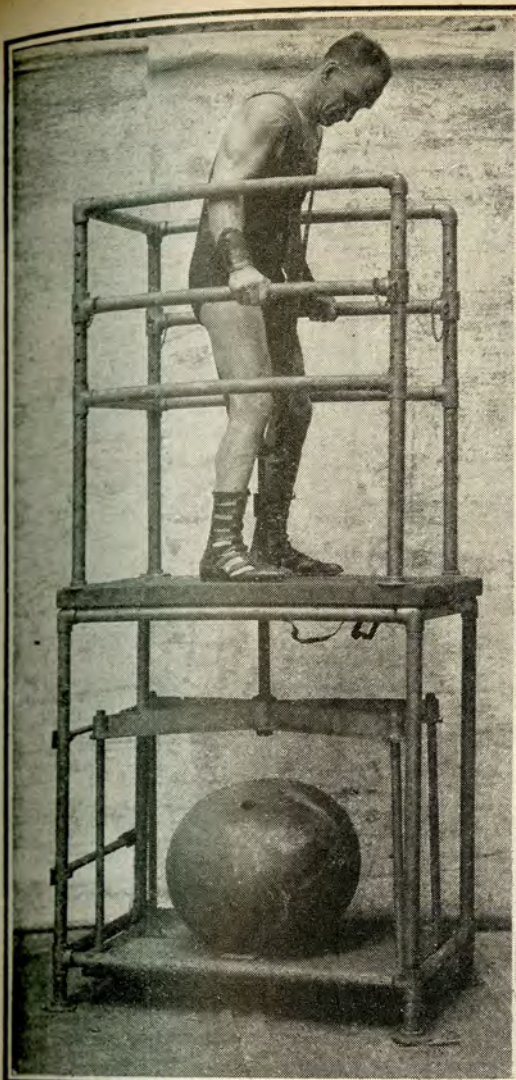


Figure 3

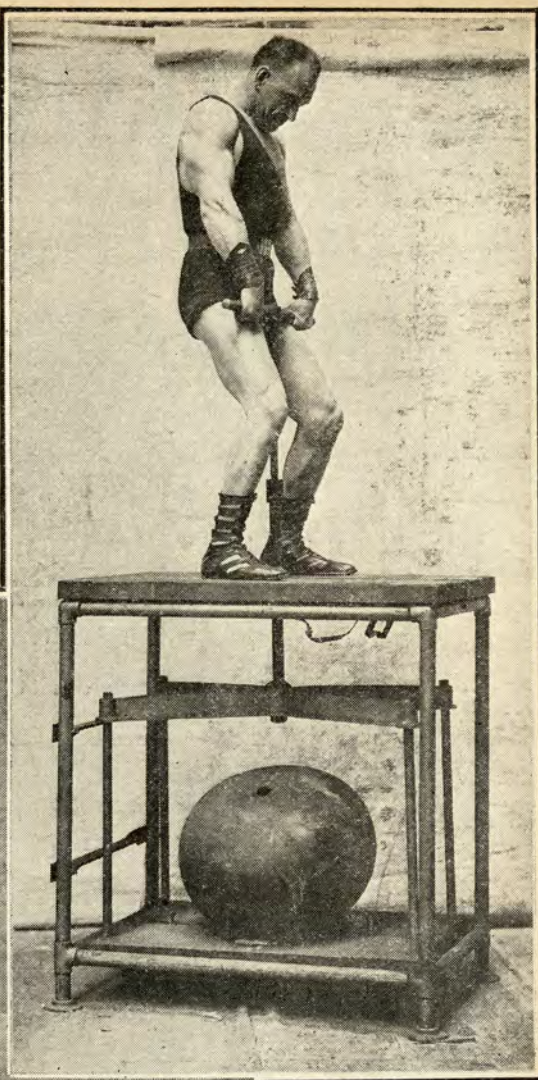


Figure 17

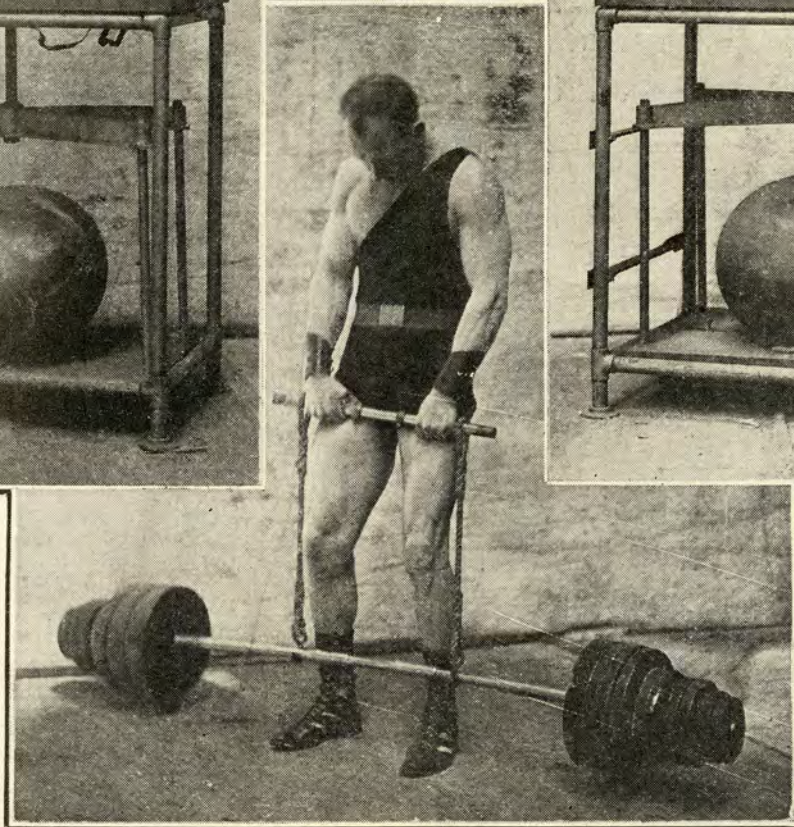


Figure 16

more, you will find that when you use 100 pounds this exercise will have the most surprising effect on the way you walk. Where you had formerly gone upstairs one step at a time, you would now find yourself going up

two or three steps at a time, just for the pure joy of it; and if you could stand between the big triplicate mirrors (such as the tailors use) you would find that along the small of the back you had two big cables of muscle.

In some systems of exercise, instead of merely bending over and touching the floor with the finger-tips, you are told to stand stiff-legged, with the feet spread apart; and then, to take a light dumb-bell in each hand, bend forward, swing the bells backward between the legs; and then swing them to arms' length overhead. This is a better exercise than touching the floor because the light bells are swung backwards at arms' length; and this movement, on account of the increase in the leverage, gives fairly vigorous exercise to the back-muscles, even when a pair of light bells is used. But that is just an-

other spine exercise. If you wish to get super-strength it is absolutely necessary for you to *teach your back to work in concert with the legs*. Later on, in the chapter about dead-weight lifting, I will show you how many so-called

"back-lifts" are really "back-and-leg lifts," in which the legs do most of the work.

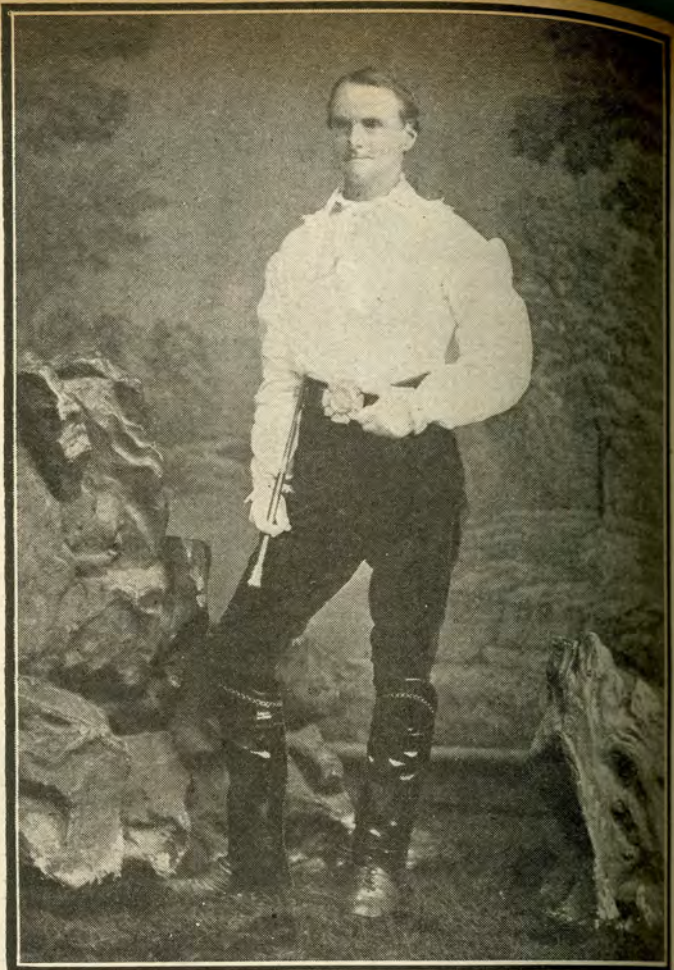
Every great "strong man," whether amateur or professional, has had to master the secret of the "flat back," which is one of the most vital requisites of super-strength. The description of the positions in which a "strong man" uses the "flat back" belongs as much in the chapter about the legs as it belongs here, but we may as well have it now. The main point to be remembered is that any individual, athlete or otherwise, can *deliver* several times as much power when his back is flat and his spine straight as he can when his spine is arched. This applies in practically any feat of weight-lifting or actual labor where it is necessary to move, shift, lift, or carry an article weighing (Continued on page 76)

WESTON'S Early Life

His Daughter's Own Story

Personal Reminiscences of the Health
Habits and Family Life of Edward
Payson Weston, the World's Most
Famous Pedestrian

By Lillian Weston Hazen



These two photographs supplied by Mr. Weston's daughter present the veteran pedestrian as he appeared at the age of thirty-seven (above) and forty-five (at the left). In the picture at the left he was dressed for his five-thousand mile hike under the auspices of the Church of England in 1884.

We learn, through these delightfully intimate glimpses into Weston's early life, that he might have been a great actor or musician, but that he found it profitable to continue "to give 'feats of endurance' to a wondering populace until it was too late to learn any art."

JUDGING from my father's ability to walk from ocean to ocean after he was seventy years of age, he must have learned the secret of conserving his strength and vigor irrespective of the number of his birthdays. Still, he had no peculiar system of diet or exercise, apart from walking.

At fifty, from his figure and movements, one would have thought him a young man under thirty, but he never teetered on his toes while brushing his teeth, or sat down on his heels while shaving, or kept the measuring cup and scales handy when he ate his meals, or repeated fool phrases so many times, or practiced any other gyrations and spells like an Indian Medicine Man or Nigger Voodoo doctor.

His appetite gauged the amount he ate. If he were hungry he swallowed a good square meal; then, if possible, threw himself down on the lounge and took a nap. "Just like an anaconda," mother used to say, but—have heard that anacondas were very long lived.

Father rarely got up for breakfast. Sometimes he had his first meal when the rest of his family lunched, but if he did not want to wait until then he ate the left-over cereal and drank the coffee that had been standing on the stove since breakfast. He was frequently late to dinner, too, when again he ate warmed-over victuals.

Eating, for him, was not the end and aim of existence, but I sometimes wondered how he managed to eat the lukewarm messes served up to him.

Mother was very methodical, and ran her house like clockwork, and always had her meals at stated intervals. Pa abhorred rules and regularity, and wanted to eat only when he was hungry.

We always had an abundance of tasty victuals, but it was plain, healthful food. Father had about as much use for swine flesh as an orthodox Jew, so we had little pork or ham. Our meats were beef, mutton, fish or fowl, and always boiled, broiled, or roasted; my father absolutely refused to eat fried meat. He did not like canned goods, either, and held mixed-up Frenchified dishes in abomination. I still remember the trouble we had in getting things we liked to eat during the month we lived at a hotel in Paris. Finally, we had parsley omelette for breakfast, and *boeuf-à-la-mode* or *mouton harricôt* for dinner, those being the simplest dishes the French chef appeared to know how to make. It got dreadfully monotonous after thirty days. At the end of the month we kept house and did our own cooking, and ate the most delicious broiled steaks I ever tasted.

The only difference Dad ever made in his diet when he was expecting to walk in public was to eliminate pie and cake. He liked every kind of pie except peach. He would eat that, too, but always grumbled that he did not see why people wanted to spoil peaches by cooking them. He liked very rich cake, and once I saw him drop a piece on his plate with a disgusted expression, saying that "when he ate cake, he wanted cake, and not bread with a few nuts stuck in it."

Now I had made that cake. I was trying to learn to cook, and hitherto my cake had come out of the oven soggy with shortening, so I had struggled to make a nice, fluffy nut cake, and naturally had been sparing of the

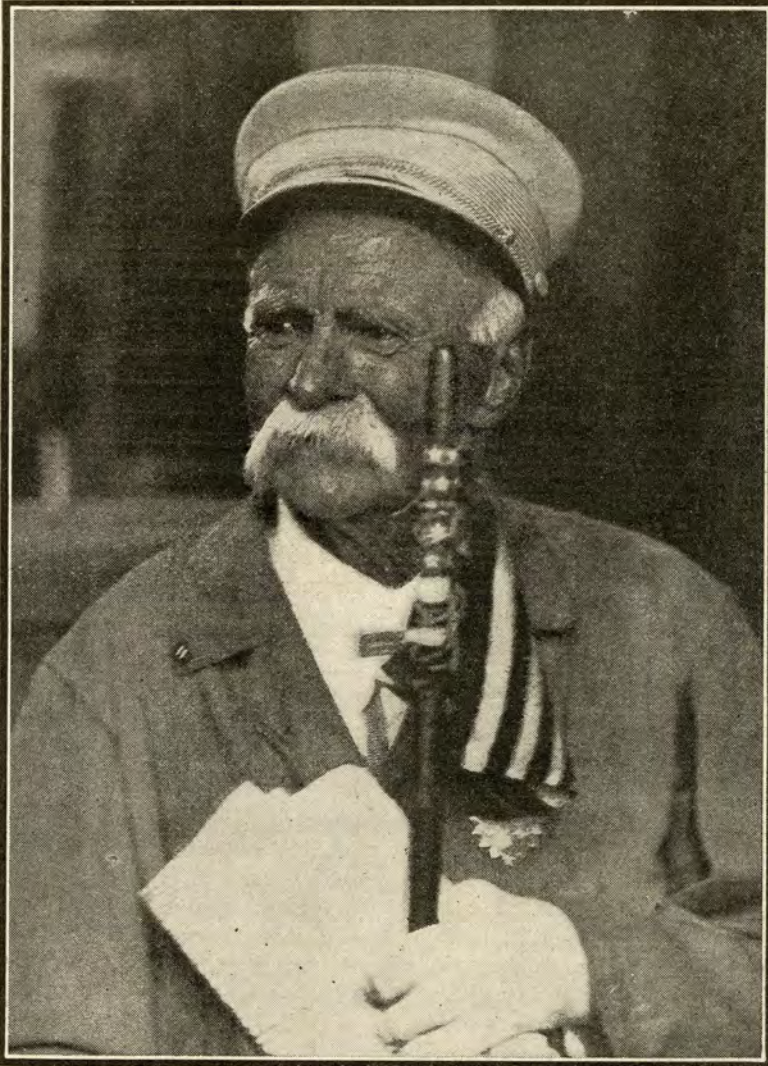
butter, but—Dad did not leave me in any doubt as to which kind he preferred.

Speaking of butter, Pa never ate bread and butter; it was always butter and bread. I think he could eat half a pound of butter a day without inconveniencing him in the least. He was also lavish in his use of pepper; his meat and vegetables were always black with it.

He drank very little water; he usually wanted it flavored with something. He liked tea, cold or hot, and drank quantities of it; also lemonade, ginger beer, root beer and sweet cider; and was quite likely to have a case of Bass' Ale or Guinness' Stout in the house. He did not care for American beer, but I have often heard him say he did not think there was any drink quite as nice on a hot summer day as iced claret. But a glass or two of it would be his limit; he never made a tank of himself.

The temperance people used to hold him up as a bright and shining example of temperance principles, as he was, but he always made a distinction between temperance and total abstinence. In fact, during the three years he was engaged by the Church of England to lecture on Temperance, he always announced frankly from the platform that he was not a total abstainer. His chief use for whis-

key, though, was to bathe his feet, although he would take it as a medicine for a cold or cough. But during his pedestrian feats he never washed his feet without rubbing them afterwards with whiskey. One of the very few rules he laid down for his children was to keep their feet dry, or if they did get them wet, to change their shoes and stockings immediately on entering the house, first rubbing their feet with alcohol or whiskey. He said sitting around with wet feet caused no end of sickness, and undoubtedly he was right. Very few men are as particular about keeping their feet dry as he was, which probably accounts somewhat for his singular im-



Keystone

Weston at the age of eighty-five, still hearty, vigorous, clear-eyed, presumably as the result of his life-long devotion to what many authorities consider the finest all-around exercise in the world. As a constitutional exercise, that is, for the heart, lungs and vital organs, certainly there is none better. Weston's health and longevity prove it.

munity from rheumatism, neuralgia and kindred ailments. He rarely wore rubbers, thought them very unhealthy, and had no objections to getting his feet wet while walking outdoors, but he was never too tired or lazy to take off his wet boots when he came home.

That was one of the remarkable things about him. At fifty he wasn't logy and lazy like most middle-aged men, but full of energy, graceful, supple, light on his feet and agile as a cat. Still, he rarely walked if he could ride; at the same time, a street car or railroad strike never bothered him any.

Father liked traveling, and rarely stayed in one place very long at a time; change and excitement seemed as the very breath of his nostrils. Still, he would amuse himself for hours playing backgammon or whist in the bosom of his family.

He loved children and old people, and was greatly beloved by them in return. He seemed to find much more pleasure in the society of people twenty years his junior or senior than in that of people his own age. Perhaps he remembered the saying, "If you want to be young, seek young associates; if you want to feel young, hobnob with the old."

He could swim, and row or sail a boat, but there his athletic tastes and accomplishments ceased. He didn't care for baseball, football, or prize-fights. He couldn't dance, skate, play golf or ride horseback, and I never heard of his going hunting.

He rarely did anything unless he liked to do it, and would never dream of learning a game or any kind of accomplishment because it was fashionable. He was always keen to get all he could out of life, but he had his own ideas on all subjects, and other people's opinions had little weight with him. I well remember the remark he made to his tailor on one occasion, when ordering a suit of clothes. The sartorial artist began to describe the prevailing fashion, when Dad cut him short with, "I'm not asking you what is the fashion, I am telling you how I want my clothes made. If you can make them as I want them, all right; if not, I'll go to another tailor."

My father liked to look well, but he put a higher valuation on health and comfort than he did on appearance, consequently, though silken pajamas might be the fashion, his winter night garment was a red flannel nightgown, made long and voluminous, which he considered a preventive of rheumatism.

When he walked in public he was surrounded by doctors, who took his pulse, sounded his heart and lungs and examined him frequently from head to heels. But if they gave advice it was received in much the same way as that of the tailor on fashions. Dad said he knew what was good for his health better than any doctor, and, judging from results, I guess he did.

My father was very deaf in one ear, and a celebrated



Keystone

As Weston looked in 1910 at the conclusion of the three thousand five hundred mile walk across America, taken at City Hall, New York.

aurist told him that the trouble was an abnormal accumulation of wax, which could be easily removed, and that he would perform the operation gratis. His offer was declined with thanks. Dad said he could hear first rate with one ear, and no doctor was going to monkey round the inside of the other one with his consent. "Besides," he added, "there were many advantages in having one deaf ear, especially if a man wanted to sleep in the morning, when there was lots of noise in the house or people were trying to get him up."

Dad always took a cheerful, optimistic view of things—even of his afflictions.

If father smoked, or was obliged to sit around with wet feet, or suffered any great grief or disappointment, he would have an attack of quinsy. His quinsy attacks seemed to me to be sort of safety valves, as the poison in his system concentrated in his throat, and was eliminated when the abscess broke. Then, too, when he had a sore throat he could not eat solid food, and so warded off more serious diseases, which gave his digestive organs a rest they doubtless needed.

My father was exceptionally clean about his person, but I very much doubt if he took his daily sponge off with the windows open; I am virtually sure he didn't if the cold winter winds were likely to blow over him, as, above all things, he liked to be comfortable. But he hated dirt, and I think would have been just as particular about his person if he were alone on a desert island or inhabited a hermit's cave in the mountains. His clothes, his cellar, and, when he lived in the country, his barn and his chicken house were kept scrupulously clean.

But if any one were to ask me what I thought was the most important factor in making my father strong and vigorous in middle age and later life, I should say his ancestors. To be well born is a priceless boon, and very few people get it.

I have heard women say that they didn't care what their husbands did before their marriage as long as they behaved afterwards, but I don't agree with them, and I am sure that the majority of people will never be able to bid time defiance as long as women hold those views. If a woman gives her children a scrub father, they are not going to be able to prolong their youth or escape the infirmities of age, no matter what they eat or how they exercise.

My father's progenitors were sturdy, self-respecting, God-fearing men and Christian women, and to them more than any other one thing he is indebted for his health and long enduring youthful vigor.

My Grandmother Weston must have been nearly seventy years old the last time I saw her, but I still have a vivid recollection of her rose leaf complexion and bright blue eyes that frequently flashed with humor and merriment. Her health was very delicate then, but she was so pretty and fragile that, in my mind, she is always

associated with rare china and old lace. Dainty, temperamental, artistic and so keenly intellectual that my mother once told me she thought my Grandmother Weston was the smartest woman she ever knew. Some praise from a daughter-in-law.

I never saw my Grandfather Weston, but my father said he was six feet four inches in height, strong in proportion, and often spoke feelingly of the size of his hand and the reach of his arm when it was put forth to punish him for some childish peccadillo that, in all probability, should have been passed over with a mild rebuke. My grandfather, too, was passionately fond of music, played the bass viol, and wrote very respectable verse.

Imagine the shock to such people when they learned their only son intended to become a professional pedestrian! I don't know if they would have felt much worse had they heard he was a second story man or a safe breaker; perdition must surely be the goal of such a career. Then my grandmother asked him to promise never to walk on Sunday, and, to comfort her, he promised. I suppose she thought that might lift the curse a little.

Although Grandma Weston always clung to her son after he elected to earn his living by *walking*, he was looked upon as the black sheep of the family by his own and his wife's relatives. He was an outcast from their sacred circle, but I don't think it affected his appetite or

sleep. Sleep was another rule promulgated by health wiseacres that Dad used to smash with serene indifference. His sleep, like his meals, was governed entirely by his feelings. He retired at nine, ten or eleven o'clock at night, or one, two or three in the morning, or not at all, if he happened to get interested in a game of cards or had important letters to write. Time meant nothing to him. He also slept twenty-four consecutive hours, if he happened to feel like it. In a way, he lived *à la sauvage* in the midst of civilization. He read in bed, too, hour after hour, but I never heard that the practice injured his eyes.

Father was exceptionally fond of music, played the cornet, and loved to sing. He tooted and warbled whenever and wherever he could find any one to play his accompaniments. His respectable relatives didn't understand him; they regretted that he did not embrace a dignified occupation like banking, or selling groceries, insurance or dry goods. To make a man with my father's erratic disposition lead a humdrum life of that description would be like hitching a race horse to a plow, or expecting an eagle to act like a barnyard fowl.

E. A. Sothorn once said that the stage lost a great actor in E. P. Weston, which was probably true. With his artistic, sensitive temperament, my father could probably have been, with the proper training, a good actor, writer or musician, but (*Continued on page 78*)



Keystone

Walking down Fifth Avenue at the age of eighty-four at the end of a five hundred mile hike. Weston is still as dapper and his legs as willing as ever. An interesting commentary is to be noted from the pictures accompanying this article, since they show that in his thirties and forties, and now again in his eighties, Weston has never failed in the art of dressing up for the part.

Six Best Exercises for Women

Try This Twice Daily
Half Dozen

By Florence Whitney

POSES BY IRENE WILSON



Photos by Eddowes

This spine twisting and spine loosening exercise, involving the muscles of the back, waist and abdominal region, is performed by standing with your back squarely toward the looking glass and twisting around first to one side and then to the other until you can look squarely into your own eyes in the mirror. Start easily, and with successive movements twist a little further around, but without straining.

ASK any woman what she is doing or why you have not seen her for some time and the answer is invariably that she has been "so terribly busy."

We are all crowded for time. There are so many things to do. And yet one always finds the time, or perhaps takes the time for anything that she particularly wants to do. Civilized living seems to be a matter of choosing the important things to do and forgetting many of the less urgent. There really isn't time for everything that one thinks she would like to do.

But, of course, keeping fit is the most fundamental duty of all, even if only, from a woman's standpoint, as the basis of personal beauty. And next to food and sleep, physical exercise is the most essential part of a woman's daily life. She is wise if she regards it as such.

But because of our busy, busy, busy manner of living—life always seems crowded whether it is or not—we all want to simplify our affairs, abbreviate things, save time, cut the corners. And unless they can find a condensed system of physical training, many women will neglect it entirely. If only it could all be done in five or six minutes—well, then it might be possible. The purpose here is to offer a condensed system of training, consisting of a half a dozen of the most important move-



This "wind-mill" exercise for chest and shoulders, and for improved posture, is done correctly only if the shoulders follow the arms forward and backward, as you will note in the two illustrations. After a few turns, reverse. Stretch the fingers to make as large a circle as possible.

ments, all of which can be finished with energy and satisfaction in five or six minutes.

One of the usual difficulties is to persuade oneself to start her exercises because she feels that she can not spare the twenty minutes or half an hour that any thorough system of training might require. But if you were to set a clock up in front of you, realizing that at the end of five minutes the exercises will be over with, you can easily coax yourself to plunge into them with the idea of getting them over with. And when once you get into them you find that they are not half bad and that they are really lots of fun because they wake you up.

So many systems of training give a variety of exercises for the arms and legs, all of which are excellent if you have time for them. But arms and legs always have a certain amount of activity in the affairs of daily life, and they are not neglected so much as the muscles of the trunk of the body. It is, in short, the muscles of the torso that most need exercise, and furthermore, it is the matter of shapeliness of the trunk of the body that determines the character or beauty of a woman's figure. The legs always get a certain amount of work. If one weighs even one hundred and twenty pounds, then every time she walks or climbs the stairs or moves across the room she is using muscles which lift her weight of one hundred and twenty pounds. Even ordinary walking gives these leg muscles at least some exercise. The muscles of the back, abdomen, waist line, chest and sides ordinarily secure almost no activity whatever. And yet these muscles of the torso are most important, because they determine the carriage of the body, which has so much to do with health. When fully developed they serve as protection for the internal parts. And, finally, they give the body its shapeliness and beauty. In a condensed system of exercise for women, therefore, one can easily dispense with special exercises for arms and legs and devote herself to a half dozen movements that will give her flexibility of body, promote good posture, keep the spine supple and straight and either remove superfluous flesh when necessary, or, in the case of the undeveloped woman, build up her "artistic anatomy."

Our first exercise is a spine twister involving the muscles about the waist and some of those of the back and of the abdominal region. You might call this an "osteopathic" exercise in respect to its value in keeping the spine flexible and young, but it is at the same time conducive to good posture and a trim waist line. Understand there is no real waist "line" in the human figure. The word is used merely as descriptive of the belt section of the body.

Our next exercise, in the nature of a wind-mill movement of the arms, while primarily a shoulder exercise and guaranteed to beautify them if per-

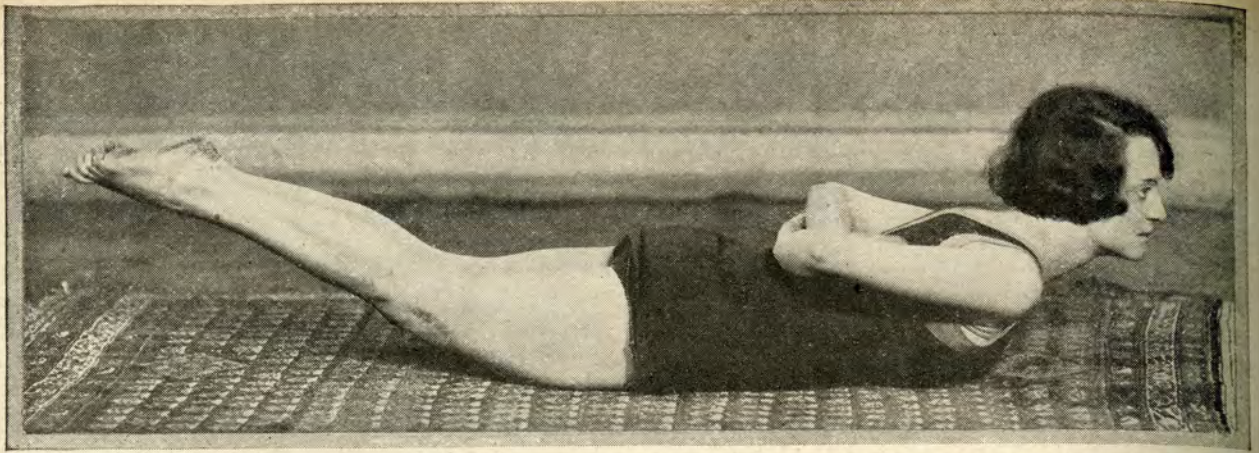
sisted in, is at the same time an ideal movement for promoting perfect posture. This exercise raises the chest, straightens the spine and sets one up in a manner calculated to give one a queenly carriage. It is done in both directions, first upwards in front and then reversed. Spend one entire minute by the clock and you will find it effective.

Our third exercise is almost a complete system of training for the trunk of the body. As a matter of fact, if one had to condense her scheme of exercises still further and could allow herself only three instead of six, these three standing movements would insure against flabbiness and physical neglect. At any rate this third exercise involves the muscles of back, sides and abdomen in a vigorous degree, and is at the same time osteopathic in nature because of the stretching and twisting of the spine. In other words, it is a health building exercise from every standpoint as well as a body building movement. Simply circle the body around from the hips up, first in one direction and then in the other, bending as far forward and sideways and backwards with each turn as you comfortably can. But do it without strain.

These three exercises, all done on the feet, may either be preceded or followed, according to your own convenience, by the other three horizontal or reclining exercises, which are also mainly for the trunk of the



This body circling exercise, while employing vigorously all of the muscles of the lower torso, is a good liver-squeezer and also serves to stretch the spine and all of the internal organs. It is invaluable. Bend far forward, swing to one side and far back and around, but avoid strain. Reverse.



This is the most logical of all back exercises, involving all the muscles from the back of the head down to the back of the thighs and even the calves. It is most easily done by clasping the hands or folding the arms behind the back, as in this illustration.

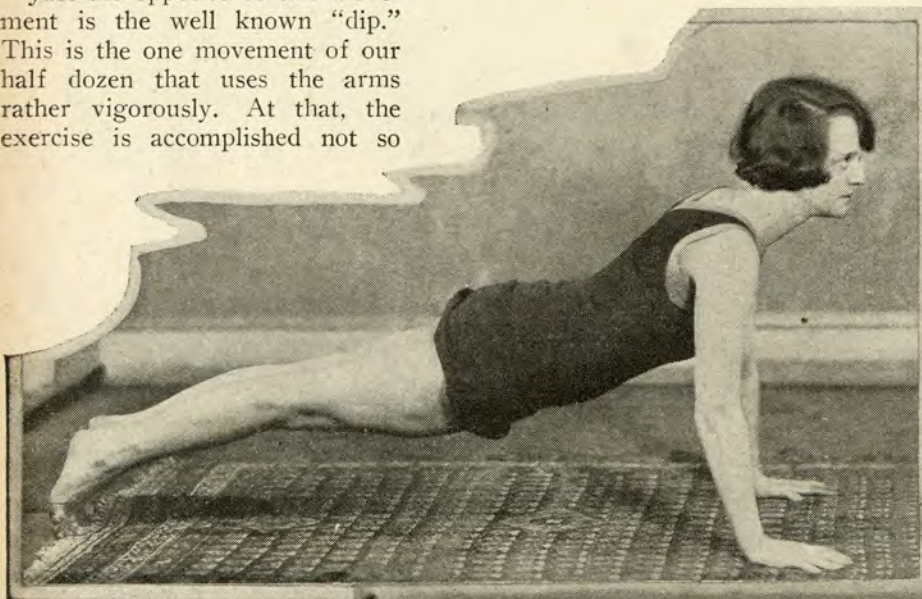
body and of special value for the majority of women.

The first of these reclining exercises is the most simple and logical exercise for the back. There is nothing more important for either a man or a woman than a strong back, and this exercise of lying face downward and then raising both the head and the shoulders on the one hand and the legs on the other, that is to say, curving the body upward, vigorously employs all of the muscles from the back of the neck down to the muscles of the back of the legs. In other words, the entire back of the body from head to feet is put under tension like the string of a bow. You will see that the muscles of the legs and the hips are involved to some extent, though this is primarily a back exercise. Two versions are given. It is easier when done with the hands behind the back. It is more vigorous when done with the arms stretched out above the head. The one makes a simple and the other an advanced form of the exercise.

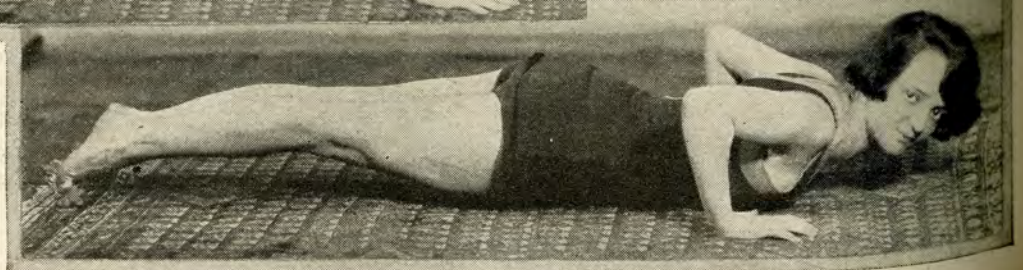
Just the opposite of this movement is the well known "dip." This is the one movement of our half dozen that uses the arms rather vigorously. At that, the exercise is accomplished not so

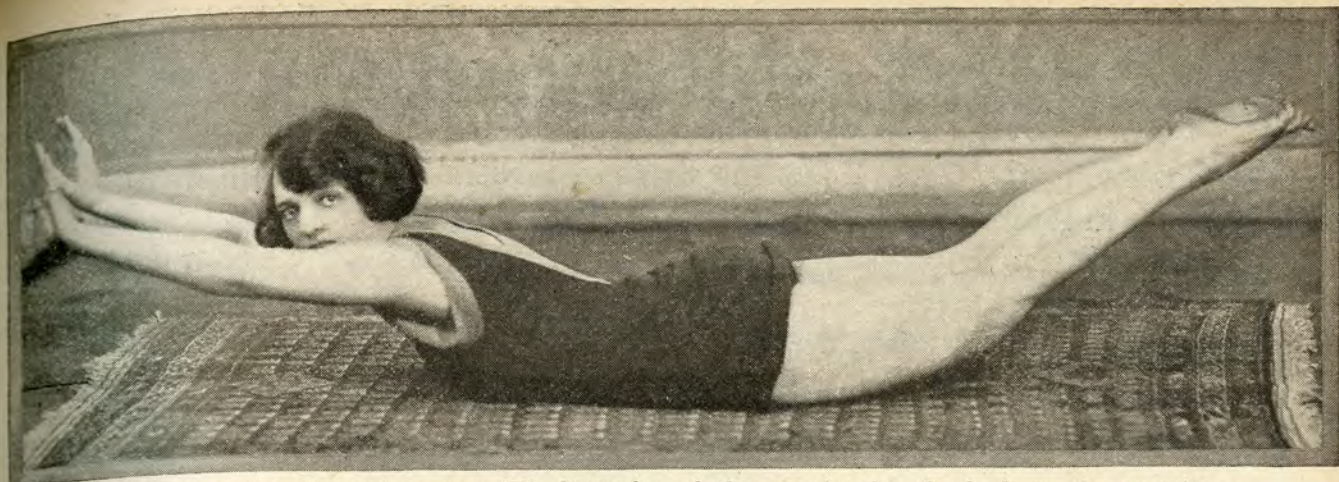
much by the extensor muscles of the arms as by the muscles across the front of the chest (pectoral), which pull the upper arm forward. The great value of this exercise, however, is that in holding the body straight and rigid, as in the illustrations, it calls for all of the muscles of the front of the body from the chest down to the legs, and in that way is just the opposite of the preceding back exercise. Some people think that the back muscles are used in holding the body rigid in the dip, but the back muscles are relaxed, and it is really the contracted muscles all the way down the front of the body that form the "string of the bow" in this movement. When bending the arms and lowering the chest to touch the floor, do not let the hips slump down and touch the floor first. Keep the hips and thighs up. Touch the floor only with the chest and push up again to arms' length.

This is an exercise easily within the power of any woman who is even half way developed. It is a pitiful commentary on the physical condition of most women, however, to acknowledge that the average woman cannot do this dip exercise at all. It is not surprising that she is lacking in a presentable figure in as much as she does not have the bodily development to do even so simple an exercise. It is not a circus stunt. Any one of athletic make-up can do this dip with one hand alone. If you find it beyond your power



The really important part of this well known exercise is that of keeping the line of the body straight and rigid. When you can do it perfectly, the legs and hips should not touch the floor, only the chest.





This is a more advanced or more difficult version of the exercise for the back on the opposite page. Do not try this particular variation until you find the other easy. The outstretched arms give greater leverage and call for greater effort.

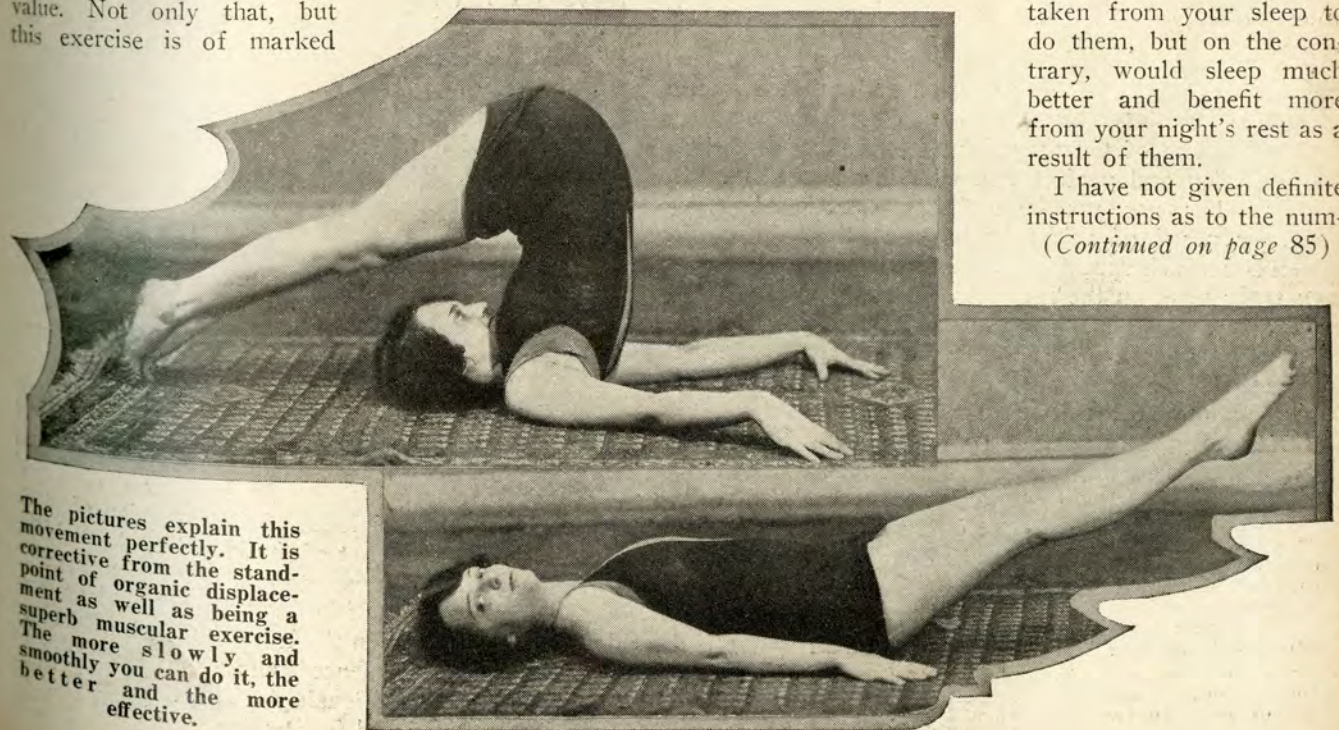
it only means that you need the training that will enable you to accomplish it. Try first raising only the hips from the floor in the reclining position and holding the body rigid until you have the strength and control to do that easily. After you accomplish this, then you can try to push the body up to arms' length and keep on practicing until you can do it well. Once you can do it two or three times you will find that it won't be long before you can do it ten or twenty times.

The last of our six exercises is probably the best of all for the abdominal muscles, which are chiefly involved in raising the legs and bringing them up and over until the toes touch the floor behind the head. Any woman who persistently does this exercise can depend upon having good, firm, muscular walls, that is, a sort of muscular corset, and may depend upon being free from rupture and various other weaknesses. But while this movement is primarily a stomach exercise, it is also good for the back by reason of the stretching of the spine, and particularly of the lower spine, which again has a somewhat osteopathic value. Not only that, but this exercise is of marked

value to women because of its effect upon all of the internal organs. This alternate doubling up and straightening out of the body likewise compresses and stretches all of the internal parts at the same time, with the effect of readjusting all the vital organs and putting them back into their proper places, if they have been displaced. For instance, a prolapsed stomach during the course of this movement would naturally go back to where it belongs. Most people suffer more or less of this prolapsus or sagging of the digestive organs and of nearly all internal parts. Women suffer a great deal in this way, and this particular exercise is corrective in this respect. It will wake you up internally and tone you up both internally and externally. Altogether it would be difficult to find six exercises which in their all-around benefits would be more suited to the needs of most women than those we have selected here.

Since the movements are so few and take so little time, they would better be done twice a day, morning and evening. You could very easily do this. You would not miss a few minutes taken from your sleep to do them, but on the contrary, would sleep much better and benefit more from your night's rest as a result of them.

I have not given definite instructions as to the number. (Continued on page 85)



The pictures explain this movement perfectly. It is corrective from the standpoint of organic displacement as well as being a superb muscular exercise. The more slowly and smoothly you can do it, the better and the more effective.

"On Your Marks—Get Set—"

Paddock's Life Story

Reviewing the Great Sprinting Stars of Recent Years—Conquering Time in America, Hawaii and Paris, Including the Olympic Champion's Record Making Races This Spring at the Drake Carnival

By Charles W. Paddock

TWO weeks before the 1921 National Championships a final tryout was staged in Southern California for the purpose of selecting the team which should represent the Los Angeles Athletic Club during the days of the championships. Again I had the opportunity of facing Vernon Blenkiron, the high school star, in a series of special races. The following distances and times were made, which later were accepted by the Amateur Athletic Union as the official marks for the races run: 90 yards, 8 4-5 s.; 100 yards, 9 3-5 s.; 110 yards, 10 1-5 s.; 130 yards, 12 3-5 s.; 150 yards, 14 1-5 s.; and 200 yards in 19 s. This last distance was at the pace of 20 3-5

seconds for the 220 yards, if it had been completed, but it was in this distance that I pulled the big muscle in my right thigh, and had trouble in staying on my feet. The trainers and doctors who examined the leg were unanimous in their opinion that I would not be able to compete in the National Championships, two weeks later. However, I could not accept their decision as final, because I could not help feeling that my Eastern critics would be sure to say that the accident might not have been as serious as alleged. I formed this opinion, perfectly naturally, because I no doubt would have felt much the same way toward some Easterner under the self-same circumstances.

That is one of the tragedies of American athletics. Co-operation and perfect understanding between rival sections has not yet been firmly established. No stronger proof of this may be cited than the petty jealousies which sprang up between Eastern and Western track stars on the last Olympic trip. But the day will come when true sportmanship will prevail and boundaries and territorial lines will be forgotten in the development of athletes and athletic spirit for the good of the nation and the benefit of the world.

However, that day had not arrived in 1921, and during those two weeks when I was confined most of the time to my bed, I had these things to think about, while a splendid trainer, Dr. Albert Weston of Los Angeles, carefully nursed the leg along and patiently brought the sides of the split sheath that covered the muscle together again.

The day of the meet rolled around and still I had been unable properly to practice or to let myself out for fear of falling. The coaches shook their heads dubiously when they thought of my competition in the games,



International

and Bernie Wefers, one of the greatest sprinters of all time, in charge of the New York Athletic Club, advised me not to try it. However, Jackie Weber, the finest trainer of them all believed that the muscle would stand up, and he spent hours the afternoon before the meet in bandaging it. Countless pieces of tape he bound around about it, and wrapped them so skillfully that each tiny particle gave with the movement of the muscle, and yet held it firmly in place, acting as the sheath was supposed to do. The work of Weber was a masterpiece and one of the best successes that even he had ever attained.

Only those who have gone through the strain of competition can appreciate my feelings when I came to the starting holes for the first heat without having tried out that leg. Kirksey, Farrell, and Blenkiron had qualified in the other semi-final, and Hayes, Sudden, Wefers, Jr., and I took the mark in this heat with several others, but it was written that one of the four would be left out of the final. The gun barked. I came out of my holes as of old and went into my stride without a tremor, and because I was nervous I ran firm and with power. The time was 9 3-5 seconds. I no longer feared for the leg.

The finals found Vernon Blenkiron, the prep. school wonder, who was virtually unknown in sprinting circles, leading the field at forty yards, and he finished in second place ahead of Farrell of New York, and Kirksey of the Olympic Club. The time was again 9 3-5 seconds. And never was a race more nervously looked forward to, and never was I more happy to have it successfully over with. The 220 yards and the relays the following day did not mean so much, and the points were most to be thought of, for with them came victory in the Senior National Championships to the Los Angeles Athletic Club and national recognition for Southern California athletes.

Having about completed my course at the University of Southern California, though still possessing a year of eligibility for track work, I left for the Hawaiian Islands, in March of 1922, at the invitation of George "Dad" Center, president of the Honolulu A. A. U. Before going I had donned a suit a few times at the University, and felt myself in good condition. The second day after my arrival in the Islands, the annual A. A. U. Championships commenced, and I ran through a heat in the 220 yards to qualify. The time was 21 4-5 seconds, and I finished feeling fine.

In order to ascertain my real condition and to see if I was running as well as the previous season, I consented to run several special distances, which included the 100, 120, 125, 175 and 220 races. The first three were run in the first race. The day of the finals there were also more preliminaries, for it seemed that every Islander had left the water long enough to try his hand at track work. All the world famous swimmers were present, including Duke Kahanamoku, Lorrin Thurston, Pua Kealoha and Warren Kealoha, the last named being a competitor that day. My heat of the hundred went in ten seconds.

Came time for the finals. I was away to a fair start, and found myself picking up quickly and running well at the fifty mark. Hope was born during this race that I might at last get the 9 2-5 seconds for which I had been so long striving, and I flew the final half of the century as I never remember having done before. But it was to no avail, the time was the old 9 3-5 seconds. After the race I could not help wondering if it were really possible to clip a fifth of a second from the record which had stood so long. Duffy had tried; and Wefers, and Hahn; Craig had struggled and Lippincott and Drew; Kelly, Parsons and Parker, all these and many more had thrown themselves into the task, in the days of old, and all had failed. Yet a fifth of a second did not seem much, nor the distance which it marked in the race, far; and with every condition perfect, the impossibility of the performance did not appear unreasonable.

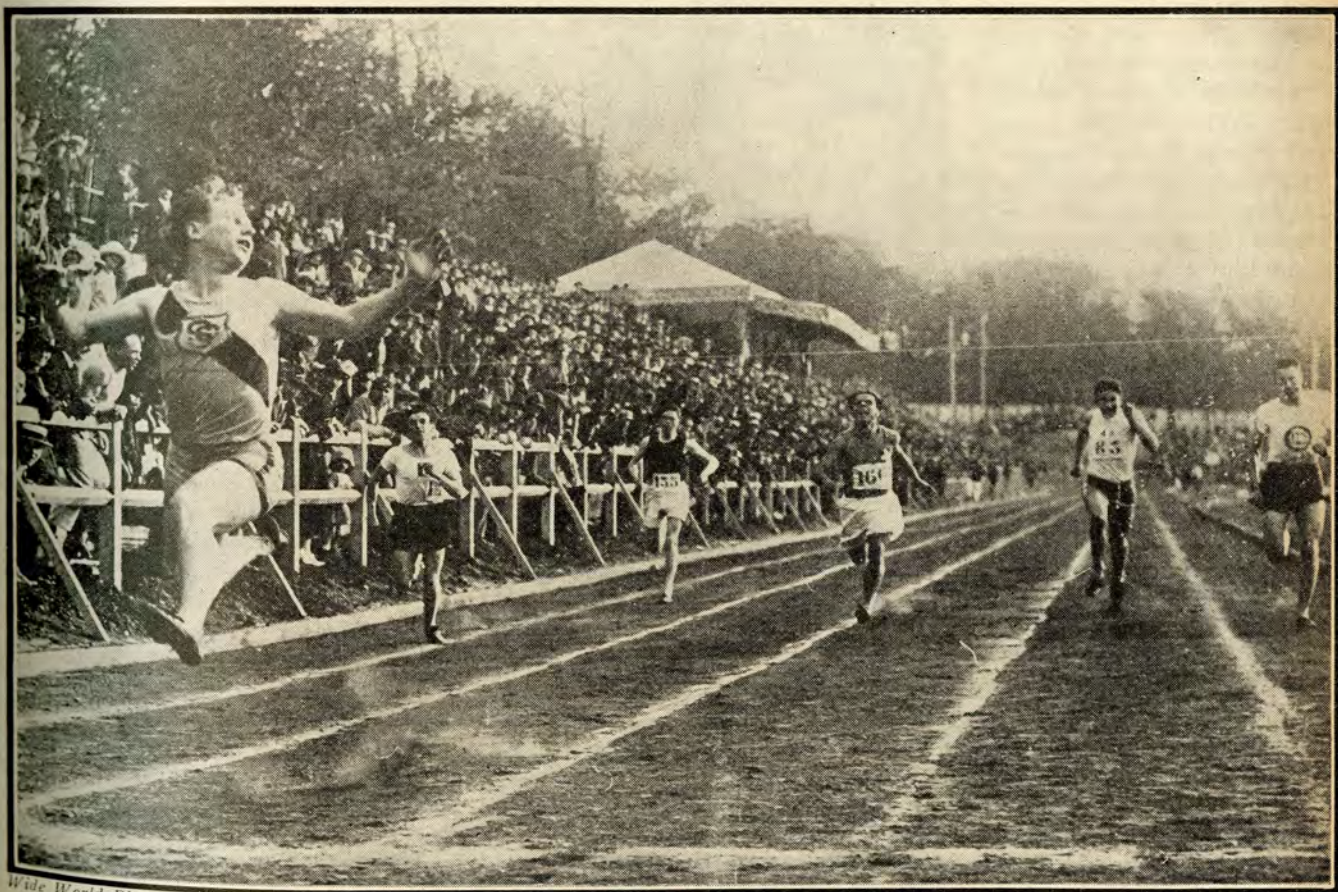
That was the one point that always gave me hope, the remembrance that conditions had not always been per-

fect when I had run 9 3-5 seconds. Either the track, or the day or the competition or I myself had not been at the best and still the time had been 9:3. Now it was reasonable to suppose that some day all of these conditions would be right, and when that day arrived, then would come the long-awaited 9 2-5 for the hundred yards.

However, this particular day in Honolulu was certainly not the occasion, though I was fortunate enough to take a fifth of a second from each of the other two records for which I had striven in the race, the 120 and 125 yard distances, running the first in 11 2-5 and the second in 12 1-5 seconds. The record was broken in the longer distance also that day, for 175 yards was run on a curve in 16 4-5 seconds.

From the island of Oahu, a trip was made to the island of Hawaii, wherein is the largest active volcano in the world, and to the island of Maui, which possesses the largest extinct volcano. Some shorter distances were attempted in these two meets, with the idea ever in mind to break the 100 yard mark if possible, and though this was never officially done, the following times were registered for the following distances: 50 yards, 5 seconds; 60 yards, 6 1-5; and the 100 yards in 9 3-5 seconds, in the island of Hawaii; while the Maui records were made on a grass track, 100 yards, 9 3-5; 50 yards, 5 1-5 sec.; 60 yards, 6 2-5 seconds.

There were several promising runners competed against in the Islands, among whom there were one or two who should be heard from in the future. Track work is new to the Hawaiians, but the determination and advancement displayed in these meets proves that



Wide World Photos.

This interesting and characteristic action photograph shows Paddock winning easily the 200 meter race at Paris in May, 1923. Apart from its showing his sensational leap at the finish of a race, it makes clear how far he outclassed the best sprinters in Continental Europe.

in the years ahead, America must not overlook the Hawaiian Islands when selecting Olympic Track and Field representatives. Of course, the Islands are already famed throughout the world for the production of marvelous aquatic stars.

This was perhaps the most picturesque trip I have ever taken, and the wonderful hospitality received there, as well as the beauties seen, will always live in my heart among my fondest memories. For from the early morning when first we sighted Diamond Head and, beyond, the beach of Waikiki, and were met by the Duke and Dad Center, to the last whispered "Aloha" the sojourn there was one of wistful gaiety, and a never to be forgotten delight.

I arrived in San Francisco just in time to witness the annual meet between Stanford and California. The coaches and the men were all well known to me and seeing these familiar faces competing against each other added a great deal of pleasure to the great contest. Coach Dink Templeton, the very same man who had been a high jumper on the Inter-Allied and Olympic trips, placed a great team in the field that day and furnished the major attraction in the hundred yards, between two of his own great sprint stars. Morris Kirksey was running his last season for the varsity of the Cardinal while little Eddie Sudden, the freshman star of the previous season, was running his first big collegiate race for Stanford. All his glory was before him, and even though he lost this race, he would be left in sole possession of Stanford track honors. However, Sudden certainly could add an additional wreath by defeating the great Kirksey, and this was the ambition of the swift little Sophomore. He was all a-tremble when the runners went to their marks and, usually a slow starter, he was the first away that afternoon. He led the field at the 25 yard mark, with Kirksey almost a yard and a half behind. The Olympic star was not worrying, however, for he expected his final spurt to be sufficient to carry him on to victory as it had done in the past. But at fifty yards, when their positions were still the same, Kirksey commenced to strain. He gave everything he had, and still the distance between Sudden and himself was not appreciably diminished. During the final twenty-five yards Kirksey gained considerably, but just when it seemed that he might overtake the flying Sudden, he tried too hard and his muscles tightened and his speed was cut down.

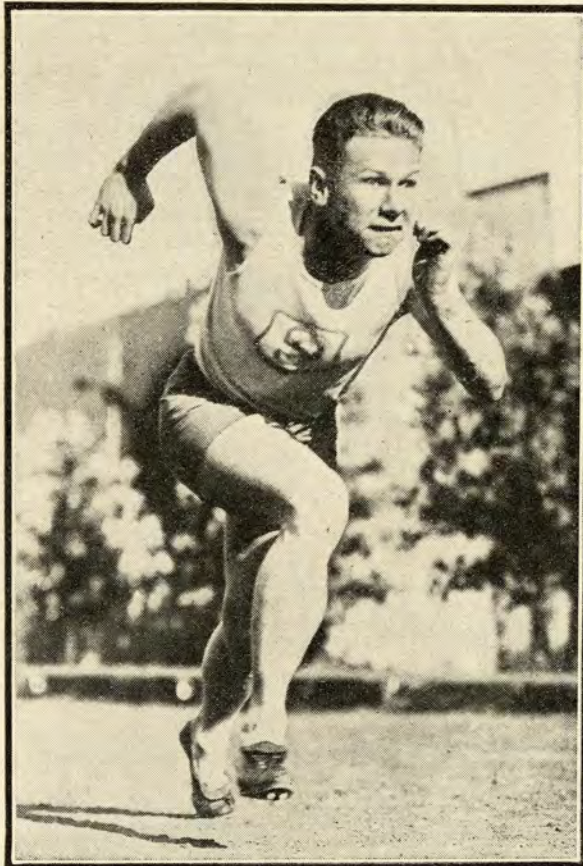
Sudden won in ten seconds, in the biggest surprise of the day.

In the 220 yards, Eddie again started out ahead and following instructions eased up to allow the rest of the field to catch up, for it was certain that the little fellow had the greatest amount of speed, for he had just proven it in the hundred yards. And if he could stay on even terms, and still save something for the final spurt, he was a favorite for first honors again. Hutchison and Kirksey both challenged Sudden at the half-way mark, and then Sudden put forth his best efforts and left them far behind. Kirksey pulled that old bad muscle of his in trying to catch Sudden and had to drop out of the race. Eddie easily defeated the veteran captain of California.

This victory of course stamped Sudden as the collegiate champion of the West for 1922, and placed him among the fastest five in the country. He had demonstrated his ability to do even time for both the century and the furlong against keen competition, which after all is the final test of true speed. Now it was up to Sudden to prove to the East that he could run as fast there as he could in the West. He soon commenced training for the intercollegiate, and Kirksey also nursed his bad leg along and hoped to go East. Two weeks before the Stanford team went back, Sudden came South to visit me and we trained together. Sudden was getting away from his holes in better fashion than ever before and he learned the jump finish, as few sprinters have ever done. When he left California, Sudden in my mind could have run the hundred yards in 9 4-5 seconds on any track and the 220 yards

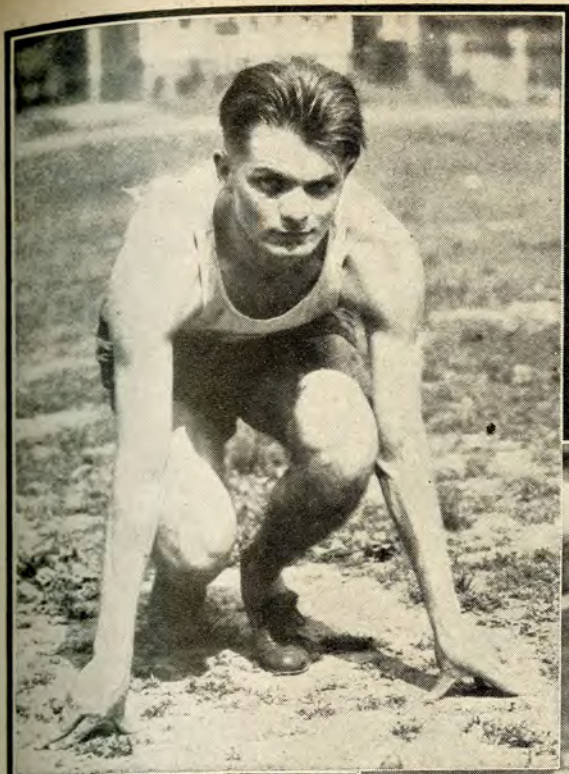
in 21 3-5 seconds, which were respectively a fifth and two-fifths of a second faster than he had ever done either race.

But Eastern competition and the change of weather conditions and the fact that he was not properly acclimated all seemed to work against the Stanford star and the best he could do in the 220 yards was to take second; and he was given a fourth in the hundred yards, though there was much question at the time as to whether he should not have been given a higher place. The runners in the century had finished in a bunch with Leconey ahead. Sudden forgot to jump for the tape as he had been taught to do and this cut down his speed.



International

A very recent photograph, taken in the course of Paddock's training in California this spring. It is a practical lesson in arm action when starting. On leaving the marks he throws his right arm back and high up. He works as hard with his arms as with his legs to acquire superhuman speed, pulling with his arms as well as driving with his legs.



F. & A.

These two are among the most promising American candidates for Olympic sprinting honors in 1924. Francis Hussey (above), New York Stuyvesant High School wonder, has registered 9 3/5 for the hundred yards. Loren Murchison (right) has won practically every race he has entered this past year.



Paul Thompson

and just about in proper condition without training for the Texas meet. This was the last fast race that Kirksey ran until the Western championships in the summer of '22, when he fooled his youngest rival, Eddie Sudden, and defeated him in the 220 yards.

Meanwhile Bob Weaver of the Amateur Athletic Union was anxious for me to run once more at Santa Barbara in a Fourth of July meet. Eddie Sudden had been invited and Kirksey also. The latter did not care to run in the handicaps, and as there were no scratch races he contented himself with watching the contests at the finish line. There were three races that day with plans for timing several distances in each. Sudden was given a small handicap and won two distances

out of the ten. I was able to break several records, but still could not lower the hundred yard mark, though I ran that distance three times during the afternoon. The following records were set: 60 yards, 6 1-5 sec.; 70 yards, 7 1-10 sec.; 75 yards, 7 3-5 sec.; 80 yards, 7 4-5 sec.; 125 yards, 12 1-5 sec.; and 175 yards in 17 sec. The most pronounced advance in Eddie Sudden's speed could be observed that day. He was altogether a different runner than the Sudden who won the Junior Championships at the Nationals exactly one year before and a different Sudden from the man with whom I had trained before he went East for the Intercollegiates. And if he

Stanford University took third honors in the meet. And this according to western figures was a complete upset, for everyone on the Coast believed that the Cardinal had much the better team of the two which went East, Stanford and California. But the Bears won. Here was how Stanford lost out: Falk, who was doped a double winner in the hurdles, stayed out of the high sticks to try for the record in the lows, and instead of waiting until the finals he attempted to break the mark in the trial heat of the lows, with the result that he tripped and fell, failing to qualify. Kirksey and Sudden failed to live up to expectations, the pole vaulter was weak and Williamson allowed himself to get boxed in the 440 yards and never even qualified, when he was expected to win the finals. And these were only a part of the upsets.

Morris Kirksey, the winner of the hundred the year before, simply could not get started in the big meet and barely managed to place in the 220 yards. One week later, however, while visiting his brother in Texas at Trinity College, Kirksey had a return to his old-time form and glided through a hundred yards in close to record time. As soon as he got back to California he came down to tell me of this race. It was simply unfathomable to him why he should have trained so hard for the Intercollegiates and failed and then gone to Texas without any training and run as well as ever he had done. The answer probably lies in the fact that he was over-trained for the Collegiate championships

stays with the game, this youngest of all of my own "Knights of the Cinderpath" is liable to prove most dangerous in the years to come.

Neither Sudden, nor Kirksey, nor Hutchison, nor I were able to attend the Nationals at Newark in 1922, and so the knights of the middle West and East were expected to uphold the honor of my "twelve." But in this they failed. For their power and strength and speed seemed to have passed, so that only Loren Murchison was still game to race in Newark. And he could not reach the finals. A new generation of runners had sprung up, and the champions of old were forced to watch from the stands the achievements of the new stars of the cinderpath. But they at least derived the satisfaction of seeing McAllister finish in ten seconds and Leconey barely win the 220 yards in good but not record time.

This "comeback" business is always dangerous. They say, and it is no doubt true, that a champion never knows when to stop. He forever believes that he is good for just one more race. It was with a feeling of nervousness and uncertainty that I re-opened my track career in the Spring of '23.

I had a small amount of college work yet to complete, and because of the war regulations regarding collegiate competition I still had one more year of eligibility. The first contest came in the Annual Southern California A. A. U. Relay Championships. There was a special hundred yards in which I have successfully competed for

eight seasons, and always there has been a dangerous runner to fight against. I look back upon Drew, Kelly, Johnston, Woods, Chaney, Cook, Schiller, Isham, Lamport and Argue, all of whom stood out as formidable sprinters. And this time it was to be Cliff Argue again, of Occidental College. Cliff was said to have improved a great deal, while it was freely felt that my best days were passed.

But the moment that the gun sounded, the same old feeling of confidence and of anticipation surged over me, though I had been scared stiff before the race began, and I felt as though I was treading on air, and ran through in 9 4-5 seconds. I felt that I had not "gone." And I have few more pleasant sensations to look back upon than that feeling.

The first big college dual meet for Southern California was against California. At this time, Hutchison was no longer in their active ranks. The hundred yards was timed in 9 4-5 seconds, and the 220 yards in 21 4-5 seconds, around the curve of a sixth of a mile course, which equals the world's record for the distance on such a track. In that race, after running hard through the curve, I eased up in the final fifty yards, and though this probably did not have anything to do with the time, yet I would have felt better if I had run through. However, I had no idea that the time was so good, while I was running.

When Eugene Goodwillie, of Chicago High School, in the National Scholastic Championships, turned in the time of 21 3-5 seconds for the 220 yards on a quarter mile track, won the National high school hundred as well, and won his relay race by the lap that he ran over the 300 yards distance, he set all the sports writers to wondering if here was not a worthy rival for the fastest stars of my old-time twelve knights of the cinderpath. Goodwillie had the rest of the twelve puzzled as well, and he looked a certainty for the Olympics of '24, if he trained right. But here he fell down, for the boy would not listen to the first rules of conditioning, and before the season was over he was unfit to compete in a select field of sprint stars. He may come back. But it is probable that he will never have the prospects which were once before him, and it is doubtful if he will ever run as well again as he did that day in the Prep. Championships.

While this Chicago boy was showing his heels to the high school runners of the East, Middle West and West there came out of New York another sprinter of great possibilities. This was Frank Hussey, who one day startled everyone by running through a hundred in 9 3-5 seconds. Hussey has made a mistake in failing to race any great stars, for it is only through competition that a man develops and obtains that experience necessary for victory in such a meet as the Olympic games. But either of these boys, Goodwillie or Hussey, might come through.

Referring to records, the writer undertook to perform a different stunt at the Berkeley-Southern California meet during this season of '23. The day was not conducive to record-breaking, for the hundred yards had been run in 9 4-5 seconds, against the wind, after many had figured that this was the chance for making a mark of 9 2-5 seconds. Any way, a "flying start hundred yards" was tried. This distance had not been run in this manner for something like forty years, and was last attempted by an Englishman. The time set at Berkeley was 8 9-10 seconds.

In this rambling narrative I have already mentioned that critics thought I should try the four-forty yards. They said that my stride was made for this distance, and that with speed and strength, which I naturally possessed, and which could be added to by proper training, I at least should give the quarter mile a try. Now this idea never appealed to me. Oh, I had thought of it often enough, as the years swept past, and as was only human I sometimes wanted to try it just once. But I felt that I was not a quarter miler and I was afraid that if I trained for it my speed for the short distances, which I knew I would always love the best, might be sacrificed. So I stayed away from the 440 yards.

However, after the California meet, as is always the custom, the University of Southern California journeyed down to Palo Alto three days later for a return affair with Stanford. That day was just another like the Berkeley day, and the hundred went in 9 4-5 seconds and the 220 yards in a fraction over the record. In this latter distance I tried to run against time, and used up all of my surplus speed and energy. While I lay in the training quarters a few moments later, Coach Dean B. Cromwell and several of the boys came in and urged that I run in the relay. "It is your last college race in California, at least," said the Dean. "And if you run we can win. But without you we will lose as we did down South. It won't hurt you any, and it will give you a chance to find out what you can do in the 440."

I remembered that U. S. C. had fallen before Stanford on our own track in the mile relay, and knew that we had three better men than Stanford could put on the track, but that unfortunately we had a half-miler who was not by any stretch of the imagination a 440 man. Yet he had to run to make up the fourth, and he easily lost all the rest gained. The story would probably be the same this time. It did seem a shame to allow three such stars as we possessed to go down to defeat again. But I wondered if I could do any better at the distance than our half-miler. The boys urged that I run first, and just hold the Stanford man, and that they would do the rest. I was perfectly certain that they would, if I could hold the first man. But there was the rub. For I doubted if I could run 440 yards at all, much less close to 50 seconds, as I would have to in order to keep in sight of the Cardinal flyer.

Because I was captain, and it was my last dual meet, and wound up a series of eight dual meets in which I had participated against Stanford, I consented, and went out to the starting line. I had many friends and acquaintances in the Stanford stands, and they all sat back to enjoy a rare frolic. For they knew how I had always dodged this distance, and none of them had the least idea of how I would run it, much less myself.

It is a pleasant memory for me to look back upon that race, and I regard it with greater feeling than almost any other contest I ever participated in. Coach Dink Templeton, he who had been with me on the Inter-Allied trip, and had nursed me back to health after my sickness in London on the Olympic journey, figured that the way to trounce me would be to put in a fresh man who had not worked that day, even though he did happen to be inexperienced. For Dink thought that he would probably know as much about running the quarter as I did.

The way this youngster came to the mark, having drawn the inside lane, I knew he was going out for the lead, and to try and leave me from the gun, and never be

headed. For Dink no doubt had said to him that I would hold back, saving for the last sprint to the tape, being unsure of how long I could make myself hold out.

So we were ready at last to take our marks, when suddenly old Reginald Caughey, who had been on the Stanford team in 1919 and on the Inter-Alled and Olympic teams as well, came running up to where we stood, and while the crowd was silent, yelled, "Where do you want me to catch you, Charley, at the 300 yard mark or at the end of the curve?" (Which was about 90 yards from home.) The crowd enjoyed this immensely, and I had a sort of a feeling that his words might be true enough.

Now the pistol flashed, and we were away. The youngster tried to hold the pole, but being a sprinter, I managed to wrest it from him as we hit that first curve. After which I slowed down. Now this was not according to the way the young man had been taught to run the 440, and he was greatly perplexed. He had been told never to pass his man on the curve, and so the only thing he could do, he thought, was to drop back, which he did. So I made the pace still slower, for I wanted to conserve every bit of strength I could, having ever in mind the words of one Edgar Reginald Caughey. When the pace had become slightly more than a walk, a pace that a miler would have scorned to stoop to, my man hearkened to the cries of the Stanford rooters "to go by!" and, forgetful of his coaches' sound advice, attempted to pass.

When he came alongside, I put forth enough speed to stay with him, and so the whole length of the remaining curve we went, he running wide, and on the outside, going many yards out of his way, and when we came into the straightaway, our positions were the same. Here I slowed down again, and he dropped back suspiciously far, so that I knew he was hoping to get the jump, and go by in a burst of speed. And so it happened.

When he flew past, the stands rocked in a great roar



Wide World Photos

An interesting group of three great champions. Note the size of the human streak of speed in the center as compared with the two big fellows, Duke Kahanamoku and Jack Dempsey, both likewise demonstrators of amazing speed in their own respective specialties.

to him, for the race seemed well won, since there was their man ten yards ahead, down that backstretch, with half the distance behind him, and his opponent a sprinter who had only speed to depend upon. But wise old Dink Templeton, the Stanford coach, afterwards told me that right there he commenced to worry. For he realized what a youngster his runner was, and after all it was experience that counted most. He knew that I could not be worn out as yet, for I had but held a dog's pace, and moreover had hardly run a full 220 yards, the distance to which I was accustomed. Experience, that is the hope of the veteran when his speed and his strength have passed from him, in the full measure in which he enjoyed them in the days of his youth.

When we two had almost finished running that backstretch, I sprinted and caught my man and passed him and tried again the same old stunt on

the second curve, and it worked in the same old way. Only this time my opponent dropped back suspiciously far, just before we finished the curve, and knowing what he contemplated I cut for the straightaway and gave everything I had down those last ninety yards. And never did a distance seem half so far. My knees would not come up, and my leaden feet scarcely left the ground, until at my shoulder was the youngster. However, after his stops and his starts, and his many yards of extra running, I saw that he was quite as weary as I. And I could not help wondering if his legs felt as heavy as mine.

Now before us were those waiting runners, and all I had to do was touch my man standing there, even with the Stanford take-off. All I had to do! It seemed as though a mountain might be more easily moved. Close upon those second lap men were we now, close and closer, and though I willed my legs to work, I was surprised, with each stride, that they had responded.

One stride more, and the race would be over! My hand was outstretched with the baton, and out of the tail of my eye, I could see that (Continued on page 88)



People often speak of "God's outdoors," a phrase which is more descriptive of the contemplating mind than of the scenery itself. But whoever heard of any one speaking of "God's indoors?"

Outing Eating

Don't Abuse Your Stomach When You Get Outdoors—
What Foods to Take with You on Picnics, Hiking and
Camping Trips—What Experience Teaches One

By Alvin F. Harlow

WHAT are the sinister forces that underlie Blue Monday? Why are vacations so often sadly spoken of as detrimental rather than beneficial? One of the potent reasons for the disagreeable reactions that follow Sundays and holidays is the fact that on those days we usually eat more than is good for us, especially if we have indulged in what some people refer to as an outing.

The current popular conception of most outings—picnics and week-end camping parties in particular—seems to be that they are eating contests held out of doors. This is the more deplorably true of the amateur outer. Your seasoned hiker or camper is more apt to have a sense of balance, and to regard food as a necessary fuel rather than as a dissipation.

Who does not remember—it may be with a shudder—the old-time Sunday-school picnic? Perhaps you may have attended one lately, for they still take place here and there. I have avoided them whenever possible for many years past. As I remember the picnic of my younger years, the womenfolks, as we called them then, used to cook for a day or two in preparation for it. Every household provided about twice as much food as was necessary for its own family, and then the assembled crowd tried to eat it all. It was not very often that we youngsters were adversely affected by the gorg-

ing, for it is comparatively difficult to overload a boy's stomach; but even we were sometimes in the condition of the small boy in the humorous picture of a few years ago, who, when his mother asked, "And what did Mamma's little boy do at the party?" replied frankly, "I frowned up!"

A slight increase in the food supply is of course logical during or after an outing. Whether you walk or are jolted on a hay wagon or spin across the countryside in an automobile, there is a stimulus to appetite in the exercise, the bracing country air and the exhilaration caused by mental freedom; and if you are in camp, cutting wood, hiking, hunting, fishing and swimming, you will of course need an unusual allowance of food to replace the calories consumed by exercise. But whether we are out of doors for a day or a month, ninety per cent. of us are subject to the omnipresent human tendency to overeat. Even the campers who are exercising vigorously and violently are—most of them—normally rather sedentary folk, and in many cases are not accustomed to taking on the enormous cargoes of food which their appetites seem to demand in camp.

The automobile has given millions of people excuses for overeating, because it has taken folks into the country who never would have gone there otherwise. Automobile outers of New York and other of our largest

cities, when they go out for a one-day spin, are apt to aim for a roadhouse around mealtime, and there eat at the rate of eight or nine rations to every five people, including lobster, crab and other foods which ought to be approached at least with caution.

Those who haven't the roadhouse habit, who live where wayside inns do not abound or who yearn for just a wild, carefree day in the great open spaces are apt to "take their lunch." This entails at least a twenty-four hour worry on the part of the ladies. If it's the Joneses and the Higginbottoms, for example, who are going, there will be long and solemn conferences between Mrs. J. and Mrs. H., and heavy buying at the grocer's and the butcher's and the baker's and the delicatessen; and each of the ladies will add to the menu about a dozen items not agreed upon at the conference, for fear of seeming niggardly. The result is that when the nice white tablecloth is spread upon the grass so that one may the more readily see the ants and spiders galloping through the grub, that besotted party sits down around it and eats of a menu which embraces fried chicken, ham sandwiches, nut bread, strawberry preserves, tongue sandwiches, devilled eggs, potato salad, tuna salad, bananas, oranges, raisin bread, raspberry jam, apple pie, cheese, pickles, stuffed olives, potato chips, blueberry muffins, chocolate cake, caramel cake, devil's food (a term which might well be applied to the layout as a whole), apples, peaches, salted nuts, cold tea, hot coffee, after-dinner mints and whatever else the fiendish ingenuity of the women of the party can devise, spurred on by their knowledge of the tastes and appetites of the males. I speak from experience, having been present at many such festivities.

Then the men (and perhaps the women, too) indulge in a smoke, after which they all subside in sprawling, unlovely postures in the shade to snore raucously for at least an hour or two, while their internal machinery, all clogged and gummed up with grease and sugar, struggles valiantly to cleanse and free itself and get back into working order again. These people are actually intoxicated on food, and ought to be subject to arrest by patrolmen of the Board of Health.

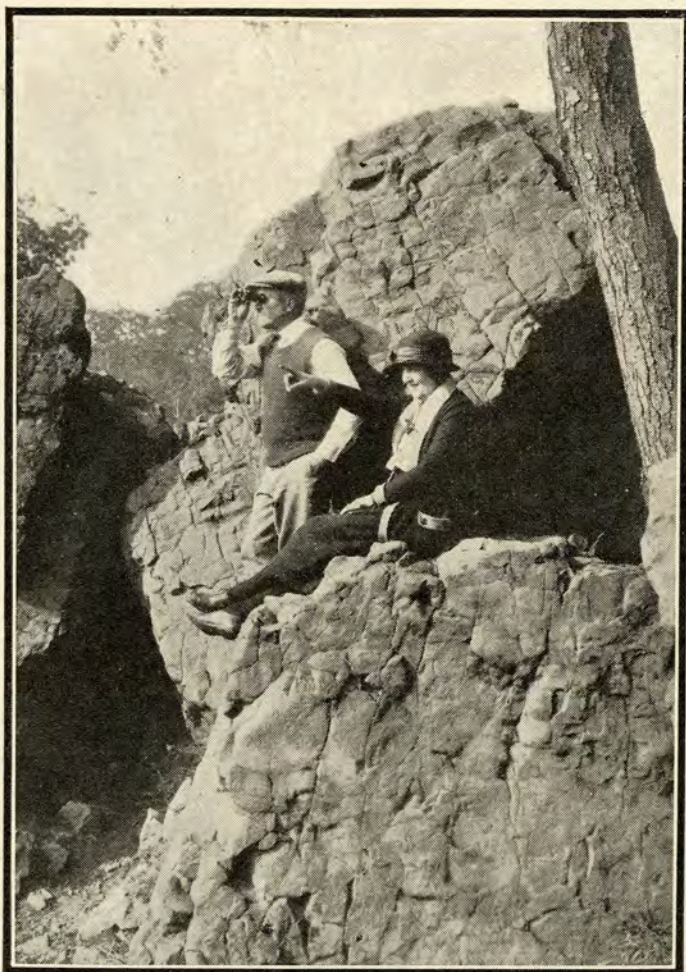
There is a noticeable decline in cordiality when the party awakes and begins to prepare for the homeward jour-

ney. They have perspired during their sleep because their bodies have been trying to throw off some of the toxin by forcing it out through the pores of the skin—and so everybody feels sticky and dirty. There are a few headaches and bad tastes in the mouth and dull, lousy feelings and consequently a tendency towards touchiness. Mr. and Mrs. Jones have a quarrel, and pout for the rest of the day. The whole party is considerably quieter on the way home than when it started out in the morning, and some of its members are thinking to themselves that these outings aren't what they are cracked up to be. The drivers' brains are still dull and befuddled from overeating; not a few Sunday and holiday evening automobile accidents might be traced to this cause if such tracing were possible. Napoleon was lethargic and stupid from overeating on the day of Waterloo; and many a Waterloo since then has been brought about by the same immoderation.

Moreover, these picnickers complain of being dreadfully tired as they near home. As a matter of fact, nothing has been done that should have made a normal person physically tired. The major portion of the supposed fatigue is merely the lassitude resulting from overeating, or in other words, from a mild case of food poisoning. I have heard city people who indulge in such outings as these declare that they detest the country and don't see how any human being can get his own consent to spend much time there. I suspect that their memories of the country are evilly colored by painful subconscious impressions left by their open-air food sprees.

I distrust any one-day or week-end outing which calls for a tablecloth. A tablecloth means too much food; it indicates that the central thought of the affair is not outing but eating. True, if you are to be in camp for days or weeks, I do not object to certain refinements and fripperies of civilization, especially if there are ladies in the party. A definite amelioration of the primal savagery of outdoor life seems to be necessary to most women's enjoyment of it. But for anything up to a three-day camp, a tin or wooden plate on my knee or on a rock is the extreme limit of my demands in the way of table service.

One of New York City's finest playgrounds is the Palisades Park, (Continued on page 92)

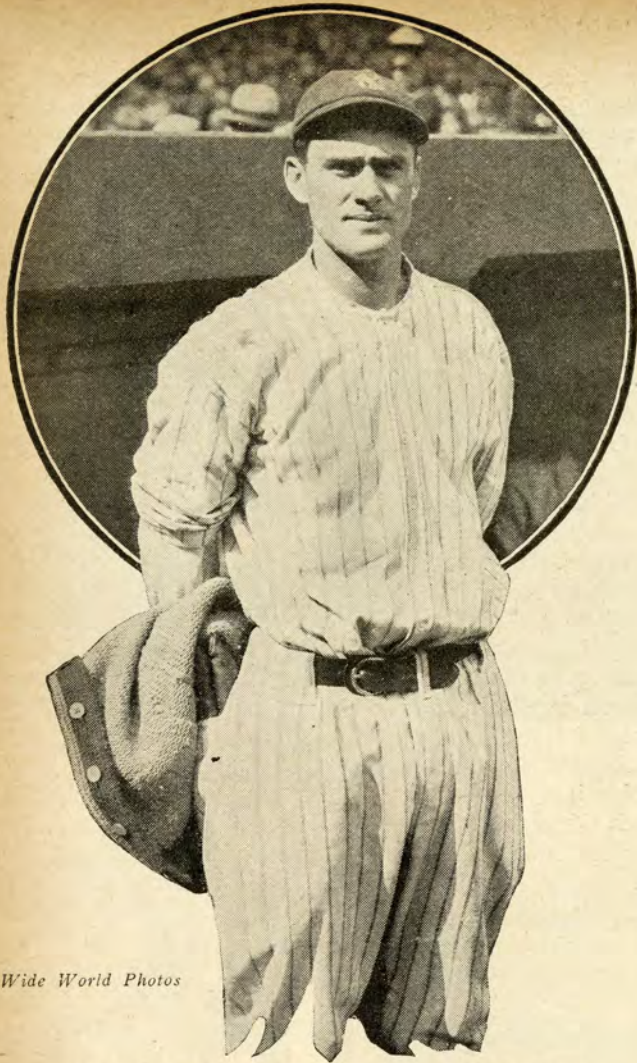


Do you go out into the open to enjoy the clean, fresh air, the golden sunshine and the glorious beauty of the trees and clouds, the hills and streams, or do you make your outings merely a pretext for unbridled gluttony?

How About *Some* Fast Ball Pitching?

Speed Counts in the Pitcher's Box as
Much as in the Boxing Arena or the
Cinder-path

By *T. Von Ziekursch*



Wide World Photos

Jack Coombs, a perfect picture of the ideal baseball physique, fast and powerful.

STYLES of the diamond change the same as women's hats. You've only got to follow the trends of baseball over a period of a comparatively few years to realize that. It applies not only to the style of play, but goes much further. The era of science gives way to the era of slugging, and that in turn to the era of pitching or something else.

Pitching styles change, too, the same as everything else.

What has become of the fast ball pitcher who used to be the idol of fandom? Look down through the list of hill stars of the present time in the major leagues. How many of them can you call fast ball pitchers in the old accepted sense? There were a lot of them a few short years back who gave you a genuine thrill when they got in the "hole" with three and two and a couple of base runners hanging around waiting to score. You could sit back in anticipation and wait. That old fast ball was the thing they'd offer, and you could bet on it ninety-nine times out of a hundred. It would come zipping down through the groove, looking like a white marble. The batter knew it was coming, too, and could set himself for it. And the best proof that it didn't do him any good to know was the fact that those old speed kings won a majority of their games no matter how often they got in the well-known "hole."

It's a strange thing, too, and open for a lot of argument, for there are just as many hurlers



Keystone

Howard Ehmke, with the Boston Red Sox, has found his greatest success in throwing a dazzlingly fast ball.

today physically husky enough to stand the strain of fast ball pitching as there were, say, ten years ago. Also it is just as hard for the average batter to connect with a "smoker" today as it ever was, and the batters of 1924 are not any more dangerous than they were in the days when Larry Lajoie, Hans Wagner, Sam Crawford and their breed were at the crest.

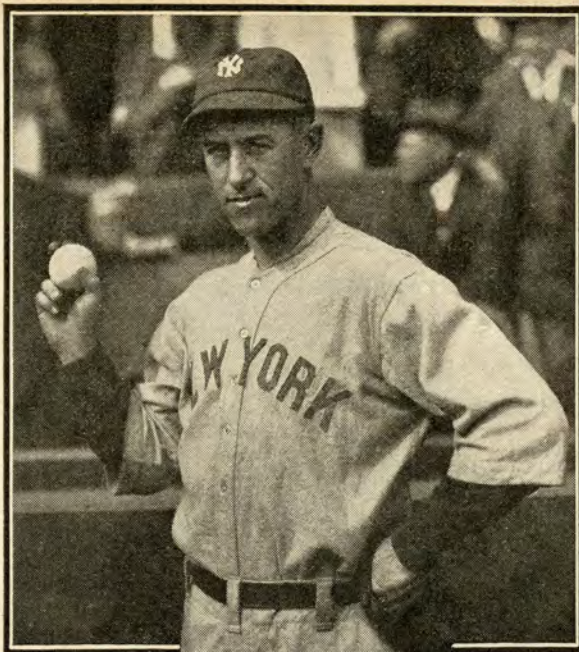
Some years ago we were sitting on the bench during a game in which Walter Johnson was pitching. As usual the Big Swede had his work cut out for him. Washington never did give him many runs to work with, and he usually had to figure on pitching something pretty close to shut-out ball to win.

Along in the seventh inning an error and a fielder's choice that went wrong put two men on base with two out and a slugging left-hand batter up. Everybody in the stands probably got the same thrill that we did on the bench. We were due to see the art of pitching in its highest form. The manager was sitting next to us, and he didn't even bother trying to tip the batter off. There was going to be some fast ball pitching as fast ball pitching should be done. Everybody knew it, and the batter best of all. Johnson cut the plate with one for a strike, and then wasted a couple trying to make the batter bite. Another strike whizzed over, and the batter never offered at it. Then came a wasted pitch, and the count was three and two without the batter having moved or offered at any of them. The manager tapped us on the knee, and we don't believe he knew what he was doing. He was merely talking aloud to himself.

"Watch him throw this one right past Jake," was what he said.

Johnson wound up and let go. From the bench it looked as though a white tape had been stretched suddenly between his hand and the catcher's glove. There was a sharp smack as the ball hit the glove, and then the batter swung. It actually seemed that he started to swing after the catcher had the ball.

That was the fastest pitch we ever saw, and we doubt whether any human being could have hit it except by the merest chance. No wonder they called Johnson the Kansas Cyclone and the Human Shrapnel. He'd actually thrown that ball past one of the heavy sluggers of the game so fast that said slugger couldn't swing his bat around in time



Wide World Photos

They call him "Bullet" Joe Bush—for very good and obvious reasons.

to meet the burning thing. Jake, the batter, came back to the bench, and nobody said a word to him. They all knew the same thing would have happened to them. We looked at him and saw that his face was strangely white as though he'd seen a ghost, and then it dawned on us that perhaps he'd been thinking about what would have been the result if that had been a wild pitch coming toward his head. Perhaps we were wrong about that. It may be that he was only reacting to the strain of standing up to that kind of pitching, knowing that the chances were about ten to one against him.

He was eager to say something, and we got up and went to the water cooler, where he was taking a drink.

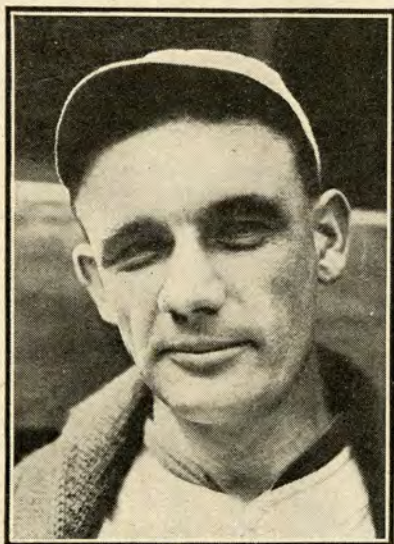
"I started my bat around as soon as his pitching motion began, an' that ball was past me before I could swing," he said, and the way he said it was a tribute.

Those were the days when Johnson depended entirely on the fast one, and the ease of his pitching motion made it possible for him to use that burning speed pitch after pitch, game after game, year in and year out. In spite of claims to the contrary, he's still got it, and can shoot that old fast one down the groove as of yore, but not as often, and now he's mixing them up with an occasional slow one and a hook. It's only when a real crisis comes that you see the Johnson of ten years ago.

The argument that the pitcher of today is too smart to waste his energy on continuous use of the fast ball won't hold water. The average speed pitcher lasts a great deal longer than a curve ball pitcher, and usually just as long as the "control" pitcher.

Take Chief Bender, the great Chippewa tribesman of Connie Mack's old championship crew. Bender was a master of the fast ball. Jack Coombs, too, was a great fast ball pitcher. Both of them had remarkably sharp breaking curves of the drop variety, but the fast one was their main reliance. It didn't tax the muscles of their arms like curve pitching.

Then there was Rube Waddell. If you recall the Rube when he was right, eccentric genius that he was, you remember how he used to swing over with that overhand fast one. It may be that he did not have any more speed than Johnson, but at least he had as much. And Waddell was about as fine an example of what makes fast ball pitching possible as any. He had hands as big as the pro-



Keystone

A close-up of Rube Marquard, one of our best speed merchants.

verbial bunch of bananas. He could fold his pitching fingers and thumb completely around the ball, wrapping it up. Mastery of speed depends on the tightness of the grip on the ball, strong hands and big ones, in other words.

You might put up an argument on the fact that the big winners of today are not fast ball pitchers. There's Adolfo Luque, the little Cuban, who almost brought Cincinnati a pennant last season with his better than thirty victories; Eppa Rixey, the six foot six southpaw who was such a heap of help to Luque in almost getting that flag for the Reds, and Eddie Rommel, the knuckle ball artist of the Athletics. Not one of them is a fast ball pitcher. Neither was Mathewson, although he had fair speed. But that doesn't prove anything.

They're a sweet assortment of curvers. But how about "Bullet" Joe Bush, of the Yankees? Without him the Yankees wouldn't have galloped through to that championship last year, and he is one of the hang-overs from the last era of speed pitching when the fast boys were supreme. Also, how about "Dazzy" Vance? He's about the only real fast ball pitcher who came up recently, and he was almost invincible for Brooklyn last year.

There are just a few of the speed kings in the big leagues, and their ability to win is beyond question. Look them over and then peep into the records to find out whether fast ball pitching is as effective today as it ever was when a real fast ball pitcher is concerned. Take Howard Ehmke, who used to be with Detroit. He couldn't win out there because somebody was always trying to change his style of pitching. When he went to the Boston Red Sox and was allowed to pitch with his natural style as an out and out speed hurler, all he did was develop into one of the sensations of the game.

Jimmy Ring, of the lowly Phillies, is another one. Ring is a natural fast ball pitcher, and any man who can grab off nearly twenty victories for the Phillies the way Ring did last year must be good.

But there aren't many of these around who depend on speed the way there were a decade ago. You can come pretty close to counting them on your fingers—Bush and Hoyt, of the Yanks; Wilbur Cooper, Pittsburgh's veteran southpaw, and Johnny Morrison, also

of the Pirates, who is a fast curve chucker; Ring and Hubbell, of the Phils; Vance, of Brooklyn; Martina, a youngster just coming up with Washington; Rube Marquard, the ancient Brave, and Walter Johnson. There are some others, especially among the southpaws, but those mentioned are the big guns of speed today, the ones you can depend on to unlimber a fast one with everything they've got on it whenever they get in a tight place. And how we do depend upon them.

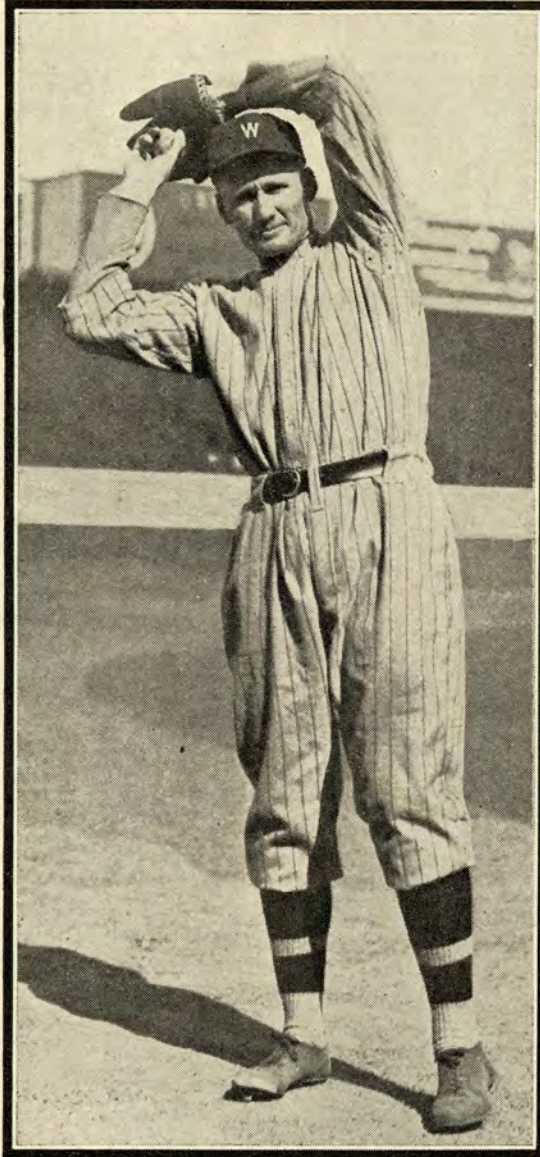
Take Johnson and Marquard and Cooper and Bush out of the lot, because they belong to the era of the old timers, and there are not many left. It seems like a long time since Marquard won those nineteen straight games back in 1912. All he had in those days was the fast one with the natural hop of a left hander on it.

At the present time there are just sixteen major league managers on the hunt for speed. Bring up some ambitious young hillman with something like the zip that Joe Wood had in the old days when he was burning them over for the world's champion Red Sox; or Guy Morton of Cleveland, or Al Mamaux when he was at the zenith with Pittsburgh, or Grover Cleveland Alexander when he won that 1915 pennant for the Phillies, or Big Bill James, who was one of the sensations of that "miracle" Boston Braves array of 1914, or Bender or Coombs of the old Athletics, or Addie Joss, or Waddell, or—well, you could pick a lot more, but the idea is just to unearth one like any of them, somebody with the blighting speed those old gunners had. There are sixteen major league clubs right now that would pay him a fairly high yearly stipend and hang onto him until he learned just what to do with that speed.

The whole thing was pretty well summed up by a manager we were talking to the other day. He's got a right hander

on his staff with as much speed as any pitcher in the game today. For a couple of seasons he's been nursing this pitcher along patiently.

"He's got it," was the way the manager put it, "and I've told him time after time to cut loose with nothing but speed whenever he gets in the hole. What's wrong with him I don't know, but he just don't seem to use that fast one when he needs it. The catcher calls for it, and he either insists on trying the curve or sends one through without any speed, where if he'd just 'bear down' with everything he's got they wouldn't touch him."



Wiac World Photos

Walter Johnson in a position of potential action. In a pinch he could be depended upon to throw a ball so fast that the batter had almost no chance at all.

Constipation?—That's Obsolete!

Our Most Popular Poison, Self-inflicted, Is Easily Avoided If One Observes the Very Simplest Standards of Healthful Living

By Carl Easton Williams

Of course we all know that the apple in the story of Adam and Eve in the Garden of Eden was used symbolically. Perhaps no one could think of anything better than an apple to suggest temptation.

But if one were to read the story of Eve offering Adam an apple in any other place than the Good Book in which the story is published, he would naturally jump to the conclusion that it was evidence of the angelic character of womankind, for it would seem to be the part of an angel to place an apple in a man's hand, and not a matter that Satan would have had anything to do with.

We know from experience very early in life that even a green apple is sometimes a temptation, that might possibly induce painful results, if not disastrous. We recall distinctly that green apples represented temptation for small boys, for we sat up in the tree in the early summer and ate them one after another. But somehow we escaped the painful after-effects usually ascribed. They agreed perfectly, just as did the cucumbers that we were warned against eating.

Whoever it was that first said that "an apple a day keeps the doctor away," seemed to know what he was talking about even long ago as it was, but part of what he probably meant was that an apple will quite capably take the place of what the drug stores sell in the form of pills, sweet syrups and not-so-sweet oils for the same purpose.

There is one complaint that is supposed to accompany a sedentary life, and as such it is nearly universal. Sedentary life is only a part of the story, but for most people it serves as an alibi. It is as much a matter of an unnatural diet as of inactive habits.

Natural living calls for natural activity and the use of natural foods. When we blundered into what we call civilization we developed merely a mechanical and materially scientific civilization. Spiritually, however, we are far from civilized. In respect to the knowledge of healthful living we are only beginning to arrive. As barbarians we ate natural foods and kept our bodies active. Only in recent years, however, has the world at large come to appreciate the means of keeping fit and the

virtues of returning to natural foods. But with this growing knowledge the old-time complaint of the sedentary is rapidly getting out of date. It no longer belongs; it is obsolete.

The human body is one of the most perfect machines in the world. The proof is that it will last one hundred years in many cases, if not abused too much. Your automobile is a machine built to function a certain way, but it requires oil and fuel and intelligent usage. With lack of lubrication or other abuses, it will break down and cease to function. In the same way your body will function if right conditions are maintained. Did you ever reflect that in the process of the survival of the fittest through countless generations, those human beings who were structurally defective, or to put it in another way, poor pieces of machinery, were eliminated, and that you who are here today represent the surviving strains of those who, during all these generations, possessed approximately perfect bodily mechanisms? The fact that you are here is the best evidence that your machine is all right. It is your own fault if it does not work.

Your trouble may be due either to lack of activity or the use of unnatural foods, or both.

Many cases of constipation are cured simply by observing a more active life. The man or woman who gets no exercise is an example of physical stagnation. The heart and lungs become weakened until they are incapable of responding to any real effort. Let the average woman or the average man, for that matter, go out and try to sprint a quarter of a mile. One soon discovers his or her lack of condition. You become very conscious of the limitations of your heart and lungs in an effort of that kind, but you do not realize that in leading a stagnant life all of your other organs become equally weak and flabby. Even the region above the ears gets soft with disuse, when it does not ossify.

Physical activity alone suffices to correct the difficulty in many cases. Jim Hocking tells a story of meeting a friend one day who looked down in the mouth, pasty-faced, and full of the blue devils. The man was a perfect picture of despair. Hocking, whose hobby is hiking, and who is not only the

There Are Some Things That No One Else Can Do For You

If you are one of those who think that some one else is going to bring you strength or health or freedom from constipation on a silver platter you are going to be disappointed. For in the long run there is no one who can do very much for you except yourself. No doctor or druggist or physical instructor can bring you physical salvation. The person who has learned the good lesson of self-dependence in the matter of regaining his own health has laid a foundation for a long life.

There are people who know better than to eat certain foods which are conducive to that nearly universal complaint which makes so many drug manufacturers wealthy, and yet through practical indifference or neglect they keep on eating them. Some people know the kind of exercises to take and the kind of food to eat, and yet do not take the trouble to do the former or to eat the latter. You can have vigorous health and you can avoid trouble in this line if you have the will to do so.—The Editor.

youngest and healthiest man of sixty-eight years in the world, but also the most enthusiastic and cheerful, had an idea of what was back of this man's mental and physical depression.

"You come out on the road and hike with me," said Jim Hocking. "I will fix you up." The man desisted, but by some manner of persuasion Hocking induced him to go out on the road for five miles a day for several days. To make a long story short, this simple practice made him a changed man. His eyes brightened, his complexion cleared, and what is more, his mind cleared.

Now any vigorous walk of three to five miles will answer the requirements of nearly every one, but especially so if one uses the heel-and-toe action of modern athletic walkers and the hip-rolling movement that goes with it. In heel-and-toe walking, which is accompanied by a vigorous arm action, the walker swings the right hip forward to follow the right leg and then the left hip forward with the left leg, thereby accomplishing an increased length of several inches with each stride. It is this sort of hip-rolling movement that enables competitive walkers to lengthen their stride and thereby gain speed. It is a very different action from the plowman's knee-sagging gait, in which the knee bends or dips after each stride. In the heel-and-toe walk the knee is straight as the foot comes down upon the heel. Much of the propelling power is from the muscles of the hip and back. In any case, the hip-rolling or hip-swinging movement is a perfect means of imparting movement and life to the entire region of the waist, stomach and abdomen. In itself it is a perfect remedy.

Every one travels to his work, whether on foot or by wheel. It is a simple enough matter to find the means of walking three to five miles every day. You should walk four miles in an hour or three miles in forty-five minutes. Surely you can contrive to do that for the sake of better circulation, more vigorous heart action, better ventilated lungs and, particularly, for the sake of the clear Lead that accompanies internal cleanliness.

However, activity of any other kind will answer. You can play golf or tennis or you can do "daily dozens." The director of a setting-up class at a big metropolitan athletic club reported the case of a chronic victim of constipation who had been spending a part of his income regularly in drug stores in search of relief. He was persuaded partly on this account to join a setting-up class in which he did twenty minutes of really vigorous calisthenics three times each week. It was the one thing that had been lacking in his case for years, and the one thing that he needed. It solved his problem.

And yet in the average case physical activity is only half of the answer. I would not wish to have it inferred that one can always find salvation through exercise if, in the meantime, he keeps on eating all kinds of refined and pasty foods, "foods that are gooey and gluey, foods of all kinds that would well serve to stick paper on the walls," as a correspondent picturesquely put it. The trouble with the American diet is that it is too much refined. White bread is the basis of our national diet, and white bread is the chief cause of constipation. However, white bread is supplemented by pasty, polished rice, refined breakfast cereals of an almost purely starchy nature, tapioca, spaghetti, macaroni, pancakes, doughnuts, waffles, leathery pie crusts and cakes and pastries of all kinds.

The remedy is a truly natural diet. All grain foods should be eaten in their entire and unrefined state. Cook and eat the whole of the wheat just as nature grew it, and if you make it into bread it must be bread made of the whole of the wheat. If you eat rice, it should be the natural, brown rice, unpolished and unvarnished. In breakfast foods one may eat shredded wheat, grape-nuts, cracked wheat or the stewed whole grain of wheat uncracked, oatmeal, whole corn ground in your own coffee grinder (not the refined cornmeal now sold by your grocer).

Vegetables and green foods supply considerable cellulose, popularly termed "roughage," meaning fibrous material that is of a nature to stimulate the surfaces of the digestive canal. The diet should contain a sufficiency of both green salads and cooked vegetables, including those of the leafy variety. And coming back to the story of the apple that keeps the doctor away, it may be said that all fruits are of great value in this connection. Eat liberally of fruit of any kind, according to season.

I have seen the program worked out in various cases, practically on a dietetic basis. There was the instance of my friend, H. H. (which are not his real initials). It was a straight case of autointoxication, meaning that form of self-poisoning due to constipation which obstructs every mental and bodily function, which produces melancholia in some or perhaps incites to crime, which makes one sluggish and tired and stupid and irritable. My friend, H. H., was in a physical and mental condition not fit for human society. Inquiry revealed the probable basis of his trouble. He was a bachelor eating around town and living upon the conventional American diet. I told him what to eat. He was to avoid white bread or white flour products as if they were poison. None of this well-cooked paste was to enter his stomach to glue the walls of his digestive canal together and keep them inactive. Being in New York City, he was told that he could buy first-class whole wheat bread, and if necessary prepare his own meals in his own room and depend upon this whole wheat bread for every meal. He was told to eat fruit liberally twice a day. He was told to eat a large combination salad once or twice each day. He was told to eat vegetable soup and vegetables in abundance. And he was told to drink water between meals.

He worked out a simple plan. For breakfast he had two or three slices of whole wheat bread toast with one cup of coffee (the only caffeine he used during the day), and a double portion of fresh, raw fruit, such as two or three oranges, two apples, a whole grapefruit or a large portion of berries. For lunch my friend ate a big combination salad, lettuce, tomatoes, watercress, onions, and so on, together with whole wheat bread and butter and a glass of milk. Sometimes he had a vegetable soup (home-made) to precede the combination salad. He was restricted to meat or eggs once a day. His dinner consisted of cooked vegetables retaining all their juices, together with celery, radishes or other uncooked green food, a moderate portion of meat, whole wheat bread, and a dessert consisting of a baked apple, stewed prunes or other stewed fruit, or possibly a fruit salad. Then before going to bed my friend ate more raw fruit according to season.

I met him a few weeks later. "How are you?" I asked.

"I'm cured!" he grinned. (Continued on page 89)

Do You "Look" Your Strength?

You May Be Better Than You Think You Are—Some Exercises That Are Poses, and Poses That Are Exercises

By David Wayne

IT was suggested in a recent article in *STRENGTH* that one could analyze one's physique by posing in front of a mirror. Also it was said that when a "strong man" posed before an audience, he was virtually practicing muscle control. It occurred to me that the three things could be combined in a way that would give an ideal method of healthy exercise for the average man.

After all is said, exercise is nothing more nor less than different movements of the body and limbs, and all such movements are caused by contraction of one or more sets of muscles. The muscles cannot improve when the body is at rest. To improve, they must do the work for which they were designed. A succession of movements, therefore, involves alternate contractions and relaxings of muscle. Inanimate objects wear out by use; but muscle grows by use. Furthermore, by giving it a certain kind of use, that is by working it against a certain grade of resistance, it is possible to control the growth of muscle. By picking out the right kind of resistance, you can develop almost any type or size of muscle you desire.

At first glance it would appear that stretching oneself is about as light exercise as can possibly be found; but there are degrees

on degrees of stretching. Physi-

ologists tell us that stretching is an almost instinctive act which we automatically perform to rid ourselves of the effect of a cramped position or a lack of blood circulation. If a man has been writing three hours steadily at a desk and finishes his job, he will stand erect, bend his body slightly backwards, raise his elbows high in the air, throw his chest out, take a deep breath, and exhale a sigh of relief. While he has been working, he has been hunched over; the back muscles have been stretched by the bent position; his chest has been cramped, and his arms are tired because they have done practically no work. When he stretches, he does several things at once. By leaning his body backward, he flexes all the muscles between the arm-pits and the hips; by raising his elbows, he flexes the muscles of his shoulders and at the same time distends his chest; and when he heaves a long sigh, he unconsciously fills his lungs with air. His body was held so long in one position that the blood did not circulate freely through his back muscles; but the moment he leaned backwards, he flexed those muscles to a degree which called to them an extra supply of blood. The more vigorously he stretched, the more benefit he got out of it. If it had been possible to take a photograph at that minute showing his back muscles, the picture would have shown that all the muscles were flexed.

I remember once reading an interview with a well known tumbler, in which the athlete stated that only two exercises were necessary to develop the strength of the waist. The first was to lie flat on the back and bring the body to a sitting position so as to develop the muscles of the abdomen, and the other was to stand erect, hold the arms above the head, and lean back as far as you could, so as to develop the muscles of the back. That second exercise is exactly what you do every time you stretch. It is possible to stretch yourself in many ways. You can stretch the shoulders apart, which of course means that you have flexed those muscles which draw the shoulders away

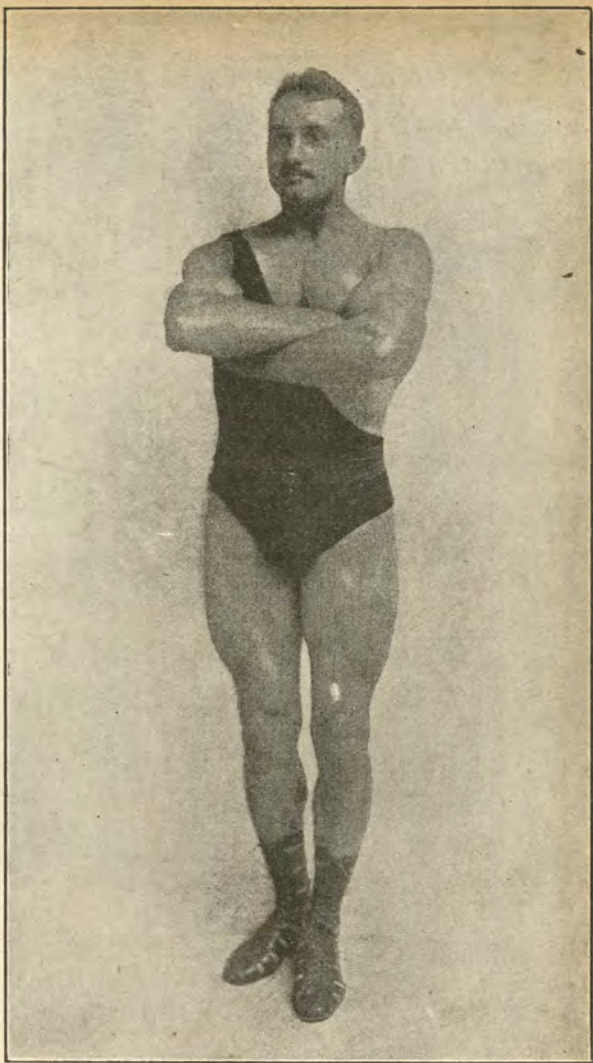


Figure 1

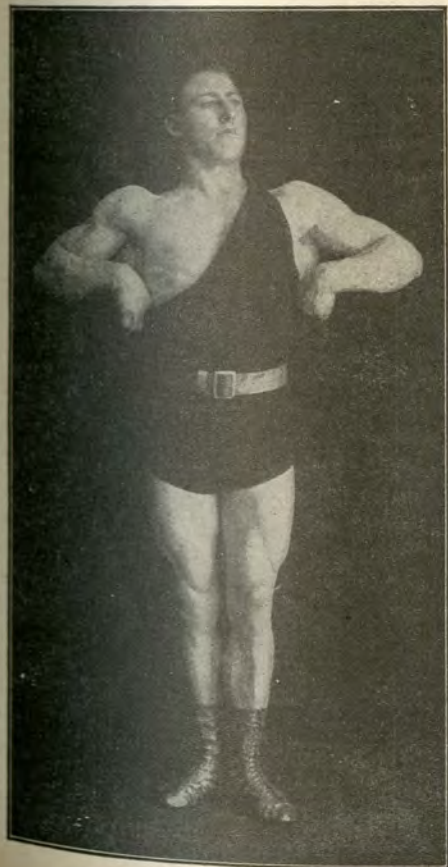


Figure 2

from each other, and you can stretch yourself by bending your body from side to side; which means that you have to flex the muscles first on one side of the waist and then on the other. In fact, stretching and flexing are inseparable. Some of you may think that stretching means only to lengthen a muscle; but it must be remembered that if one muscle or set of muscles is stretched, there is bound to be a flexing of some opposing muscle or set of muscles. When a "strong man" poses before a theatre audience, he does a lot of stretching in order to make his body seem as big as possible to the awe-struck eyes of the on-lookers. In order to show some of his muscles at their best, and in order to make the most of his splendid proportions, he deliberately stretches and flexes his muscles at the same time. The ordinary posing act consists of twenty or more different poses, or at least a dozen. By the time the "strong man" steps off the posing pedestal, every muscle in his body has been flexed to its very utmost.

I have seen athletes whose muscles appeared to be actually bigger at the end of the three minutes' posing than they were at the start.

I have had enough experience to know that when a well developed athlete is about to have some pictures taken, he will say to the photographer, "Just wait a minute until I warm up." Thereupon he spends the next few minutes in doing some very vigorous movements so as to get his muscles flushed with blood. When he steps in front of the camera for his first pose, his muscles appear to be much more clearly defined and bigger than they were before he warmed himself up. I believe that some of you must have noticed that after a few minutes' vigorous exercise, your upper-arm measures anywhere from an eighth to a quarter inch more than it did a few minutes previous to it. If it is possible to thus make a noticeable difference in the arm muscles, surely it is equally possible to make a corresponding difference in the size of the muscles on the shoulders, the chest, the back and the legs. In order to make that difference, you have to use the muscles named with special vigor to draw the blood to them. So, if you will do in succession the different poses which I will describe, you will be able, in the course of a comparatively few minutes, to draw the revivifying blood to every single part



Figure 3

second man. The reason was that the first man knew how to pose, which means that he knew the positions in which he could flex his arm muscles to the utmost. It usually happened that a man who knew how to properly display his arm muscles also knew how to give the best possible appearance to his leg and back muscles. At a rough guess, I would say that not more than one man out of ten can do himself justice in pictures. It is quite possible that you are one of the nine who lacks that knowledge. So that explains what I mean when I say at the head of this article that "you are better than you think you are." Perhaps at some time or other you have paid a visit to a photographer and,

after swearing him to secrecy, posed for a couple of muscle pictures. I can unhesitatingly assert that when you got the proofs you were more apt than not to be disappointed in the way you showed up. Perhaps you blamed it on the photographer, or perhaps you concluded that you had been kidding yourself; but I would not be surprised if, after paying for the pictures, you either tore them up or else hid them away in your desk.

The fault was more yours than the photographer's. If you had known how to properly display your muscles, the camera would have been sure to get that display. Remember that the photographer knows

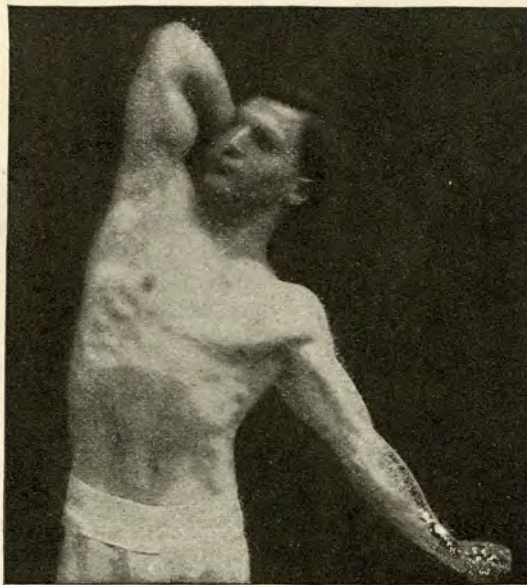


Figure 4

but little about muscular posing, and so he leaves it entirely up to you. There are some photographers who are bright enough to put a full-length mirror directly in front of the camera so that the subject can see exactly how he is posing. Then when the subject is satisfied that his pose is as good as it can be, the photographer pushes the mirror out of the way and snaps the picture. But even that is not of much assistance if you have not thoroughly rehearsed your poses.

The easiest way to get an effect is to carefully copy or imitate the pictures of men who know how to pose. By this sort of practice you can not only learn posing and so show yourself at your true worth in your pictures, but you can get a very valuable kind of exercise at the same time. To give you something to work on, I have selected and borrowed ten pictures, all of different men, and I have arranged them in the order in which a "strong man" would do these poses in a lighted cabinet.

When the curtain rises and reveals the cabinet, the athlete is usually posed as in Fig. 1. His arms are folded across his chest, his body is perfectly erect. In order to create a good first impression, he flexes every visible muscle. Naturally he makes himself as tall as possible, which means that he stretches himself upward to the limit. He carries his weight on the balls of his feet and the heels barely touch the ground. His abdomen is drawn slightly inward, and his chest is held high. After he has folded his arms, he hardens all the arm muscles. The old style way was to fold the arms loosely across the abdomen and to use the knuckles to push out the biceps muscles. The modern poser rests his forearms very lightly on the chest, and by hardening both the biceps and the triceps muscles in the upper-arm, he makes his arms look much fuller than if he only pushed out the triceps. Through long practice he is able to control every part of the body. So he flexes and hardens the muscles on the breast, forces the shoulders away from each other, and at the same time flexes the latissimus muscles on the back, so as to make the sides of the body bulge outwards and give that nice outward curve which you see on the left side of the body. In this particular pose his body has been twisted just a little bit to the right, so as to show the line of the left side. If a man were facing directly forward, the el-



Figure 5

bows would hide both sides of the body. Remember this, if you make this pose before a camera. If the fellow had stood with his weight on one leg, the other leg would have to be bent at the knee, and in that position it would be impossible to properly display the leg muscles. By distributing the weight evenly on both feet, it is possible, by mental control, to harden every muscle in the thighs. By turning the left foot slightly outward, you rotate the whole leg, and in this way throw the left thigh partly into profile. You can see for yourself that the curve on the outside of the left thigh is more pronounced than that of the right.

It will be some time before you can exactly duplicate this position; but if you stand in front of your mirror and make several successive trials, you will soon learn to make all the muscles named display themselves just as do the muscles in this picture. Every time you make a trial and harden one set of muscles to the limit, those muscles become flushed

with blood, and as you learn to flex all the muscles simultaneously, you get an exercise which involves the mental control of every part of your body from the ankles to the neck. After the first day's practice, your muscles will feel a little bit stiff and sore, but this disagreeable sensation will soon pass as you continue to practice daily.

After the athlete has held the first position a few seconds, he shifts to position number two, which is intended to display the breadth of his shoulders and the width of his chest. As he places his hands against the sides of his chest, he raises the shoulders and at the same time spreads them far apart. Raising the shoulders makes the deltoid muscles rise up in two impressive lumps. Spreading the shoulder-blades apart gives a temporary increase of three or four inches in the width from arm-pit to arm-pit. But while doing this movement, the athlete does not forget his arms or legs. He has bent the arms at the wrist, which enables him to flex the muscles on the under side of the forearm. By tightening the whole arm, he makes the muscles on the upper side of the forearm stand out in a curve which overlaps the biceps. His upper-arm muscles are all flexed and so are the muscles of his legs. Even



Figure 6



Figure 7

though the attention of the audience is fixed on the shoulder display, the athlete cannot take a chance of relaxing his leg muscles and thus spoiling the general effect of the pose. The exercise value of this position is that it makes him flex the muscles which raise the shoulders themselves, and the muscles which spread the shoulder-blades apart. After a few days' practice you will be able to make yourself a couple of inches wider than you could on the first day; which means that you have commenced to get control of the upper-body muscles. The only way to get control of a muscle is by using it. Therefore, if you make a few attempts each day to improve yourself in this pose, you will get considerable exercise for the muscles named.

In Pose 3, the athlete has dropped his arms to his side and slightly arched his back in a way that allows him to contract the muscles along the front of the abdomen. By clenching his fists tightly and turning the right limb towards the audience, he shows the greatest breadth of the left forearm; but as this position makes the left upper-arm look thin, he shows the audience the thinnest part of the right forearm and the full breadth of the right upper-arm. This is done by turning the back of the right hand towards the audience or camera. In order to give a different view of his legs, he bends the knees slightly as though he were ready to spring either sideways or forwards. This partly crouching position throws a little actual work on the thigh muscles, and he thus accentuates, by further tensing those muscles, their mental control. When you practice the pose you will first have to learn to harden the abdominal muscles. This seems hopeless if you happen to be a fat man. So if you're afflicted in that way, you will have to repeat this pose not once, but two or three dozen times in quick succession. The intense mental concentration which you will make in your effort to render the flexed abdominal muscles visible, will actually help to burn up the fat which has so long hidden those muscles.

The next pose in order is No. 4, which is done while the athlete is still facing the audience. In order to flex the biceps in the most impressive way, he has

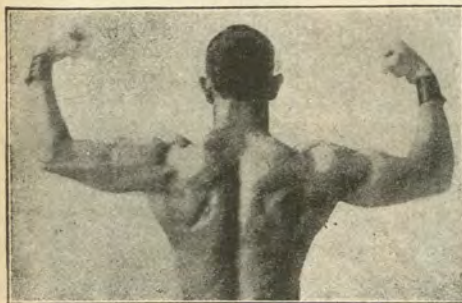


Figure 9



Figure 8

raised his right elbow in the manner described in Mr. Calvert's recent article on muscle control. By bending the body to the left and pushing the left hand

down as far as possible, he makes the muscle on the left side of the back stand out at a sharp angle. The act of raising the right elbow has drawn the right shoulder upwards, and this helps to make his chest look broader. This position also aids him in displaying the "serratus magnus" muscles, which are the saw-toothed muscles attached to the ribs. Even though the abdominal muscles are stretched, this man has sufficient control to allow him to harden them to some extent. When you use this pose as an exercise, you should do it both ways; that is, first raise the right elbow and lean to the left, and then raise the left elbow and lean to the right. By repeating each position a half dozen times, you will positively give work to every muscle above the hips.

In No. 5, the athlete has turned sideways to the audience and then has rotated his body on its own axis so as to make the shoulders very broad in proportion to the hips. This man has allowed his hips to turn a little more than he should; but undoubtedly his idea was to let the audience see the inside view of his left arm. The leg position puts the right thigh in profile, and by pushing the right knee as far back as he can, he has accentuated the growth on the front of the thigh. But to push that knee back requires an extreme flexion of the thigh muscles. In this way he shows not only the sweeping front curve, but also the biceps on the back of the thigh. The left leg is viewed from the rear; but that its muscles are flexed you can tell by the shadow lines that appear. The arm position shows the right triceps flexed, while in the left arm the biceps and forearm muscles are most apparent. In order to make his shoulders seem wider, he has spread his shoulder-blades apart and hardened all the muscles attached to the shoulder-blades. That is what makes the appearance of hills and valleys of muscle across the back. This pose will take a lot of rehearsing.

While still standing sideways to the audience, the athlete shows the depth of his chest by Pose 6. He takes a long breath so as to raise the ribs by pressure

from within, and after he has gotten the maximum expansion, he suddenly hardens all the muscles on the front of the chest. In order to enhance the
(Continued on page 84)

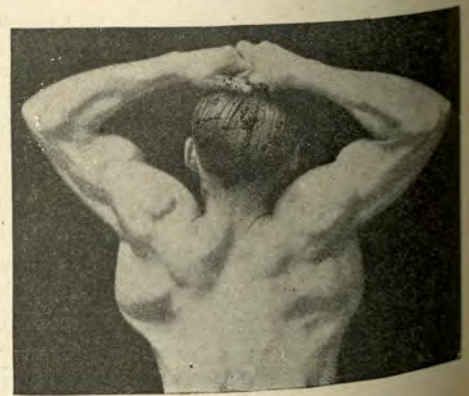


Figure 10

Massage Puts New Life Into Tired Bodies

The Little Brother of Exercise—You Should Know As Much About It—A Logical and Essential Part of Physical Training—How You Can Apply to Yourself

By L. E. Eubanks

I THINK it will be generally conceded that two or three thousand years is a long time for anything to remain in public favor. Massage as a therapeutic agent and beautifier was used as long ago as 470 B.C.—probably long before that. Socrates and Plato made references to massage, as “friction,” and Plutarch tells us that Julius Cæsar (B.C. 100-44) had himself pinched all over every day as a treatment for general neuralgia. Massage—in crude forms, of course—is at least as old as surgery.

“Rubbing” is no more the whole of massage than addition is the science of arithmetic. I think massage really comes from a Greek word meaning *knead*, but, anyway, it is a far broader subject than is indicated by either of these terms. It comprehends both of them and much more.

Massage has been likened to exercise. They both effect their results through the circulation, but while exercise builds tissue somewhat more effectively than it eliminates waste, the reverse is true of scientific massage. Massage will not fully take the place of exercise (unless we refer to self-treatment of a highly vigorous nature), but it is a far better substitute than is generally realized.

Massage means a lot to the athlete and manual laborer. Runners, boxers, and athletes generally know that they owe a lot of their suppleness to the masseur.

I think it is common knowledge that the rub-down and kneading keep the muscles “fast” and resilient; but did you know that the massaged muscle is also *stronger*, and do you know why?

H. Joseph Fay, a well known Australian athlete and one of the best authorities on training, states that both Donaldson and Postle, world famous Australian runners, owed their speed and endurance more to massage than to any other one thing except the running itself. Mr. Fay tells, too, of an interesting experiment. A man lifted with his little finger 2 1-5 pounds 840 times, lifting the weight once per second. The muscles of his finger were then completely exhausted; but after

five minutes' massage he was able to lift the same weight 1,100 times, and the muscles were not even then greatly fatigued.

“Fatigue poisons” is the term now applied to the waste products which result from muscular work. Nothing could be simpler than that the muscles are clogged and impeded by these ashes of combustion. The more prolonged the contractions of muscle, the more waste; but the more massage the less waste. Here's where massage proves itself the logical ally of exercise; it enables us to keep the blood coursing through the veins after the work has ceased, and thus cleanse every fibre.

But athletes have no monopoly on this wonderful conditioner. All people who suffer from any complaint resulting from retained waste will be benefited by intelligent massage, for we know that a heavy percentage of our bodily ills come from retention of self-manufactured impurities. When we recall that our muscles make up half of the normal bodily weight and hold one-fourth of the blood supply, it is obvious that any measure which affects them as does massage must exercise a powerful general effect on the health. And practice bears out theory, for a thorough massage, given by one who knows how, is a tonic of the highest order, clearing the brain, energizing the nerves and muscles, “pepping” one up in a way both gratifying and astonishing. Here is a “bracer” we can rely on to be

free from any bad reactionary effects or any “morning after” lassitude and regrets.

The services of a professional masseur come rather high, and for that reason it would be well for every one to learn how to do the work for himself. Two other good reasons for self-massage are that it may be used as an exercise for hands and arms, and secondly, that the services of a masseur are not available under all circumstances.

But, as I have intimated, the science is not as simple as you may have supposed. To get the best results you should know something of anatomy—about the bones, muscles and blood vessels. Always remember that

(Continued on page 80)

The Quickest Way to Rest Yourself

PEOPLE usually think of sitting down, or lying down or going to sleep, in order to rest themselves. But that is not the quickest way to secure rest for tired muscles, as you will realize when you understand that rest is not a negative or inactive process, but on the contrary, an active and constructive process; that is to say, one of building up and restoring a condition of cleanliness and vigor in the tissues. Massage is restful when the tissues are choked with wastes or fatigue-poisons, because it squeezes out these wastes by increasing the circulation.

There are two kinds of fatigue. One is muscular and due to the accumulation of waste products—a condition like that of a furnace choked with ashes which must be removed. The massage quickly relieves and gives new strength in such a case. The other form of fatigue is exhaustion of nerve cells, and it seems that only sleep, which is another constructive and active process, can restore or fill with energy the drained-out nerve cells.—The Editor.



Angry, disheartened, bitter, Gantry went out into California Street. A girl, passing, glanced at him, hesitated, looked back, hurried to his side.

The Plot Thickens

LIKE many others in the midst of a fight, Craig Gantry does not yet know whether his struggle will terminate successfully or in failure. Nor is he quite sure in the ebb and flow of his fortunes whether he is a man or a weakling. But things are happening very fast.

Craig Gantry, down and out and nearly dying in a blizzard in the Sierra mountains, has been nursed back to health by Mary Clyde and her blind and deafened father. He finds his hosts under obligations to Sill Thurston, timber baron, and to relieve them Gantry undertakes to cut down, saw up and market the timber on their land. In all his operations he is in conflict with Thurston and the powers behind him. Andrew Fack's

sawmill, having been burned down, is rebuilt, but there follows trouble between the mill-hands and the lumberjacks, crystallized especially in a feud between Noel Thomas, the woods boss, and Defoe Brant, in charge of the mill, but suspected of being still loyal to Thurston, his former employer. After one shut down of the mill, increases in railroad rates, and other difficulties, Francis Clyde, Mary's father, dies, leaving Mary more or less under the protection of Gantry. About this time Craig receives a telegram from A. M. Michaelson, asking for an interview in San Francisco relative to a contract for manufacturing box shooks for California fruit packers. Following Craig's departure, Defoe Brant, intoxicated, breaks into Mary's house after being bitten by one of the dogs, and Mary is rescued only by the timely intervention of Noel Thomas.

"Life Feels Like a Fight"

By Wilbur Hall

ILLUSTRATIONS BY THOMAS SKINNER



"Gee!" she cried, "what luck! I was going to telegraph you tonight."
It was Mellette Robin.

CHAPTER XV

I

Andrew Michaelson, general manager of the Pacific Pine Shook Distributors, was a tall, thin, dynamic young man with a passion for his work. At first Craig Gantry was unable to understand it. How a man could flame with an almost fanatic zeal for the making and selling of thin sheets of wood for the manufacture of boxes was beyond him. It seemed incongruous—almost ridiculous.

But Michaelson gave him the key at last.

"Parker Forbes told me that you are lined up against Goodsill Thurston, of the Granite Ridge outfit, Mr. Gantry," Michaelson said. "That's one reason why I

picked you out of all the lumbermen in the state who are supposed to be independents. Was Forbes right?"

"If I have an ambition," Gantry said, half-laughing,—"and I'm not sure whether I have or not—it is to give Sill Thurston the licking of a lifetime!"

"All right. I believe in laying my cards on the table in a transaction like this one. If you come in with us you'll have to know the whole story. I'm going to trust you with the outline now."

He rose impulsively and crossed his office to where there hung a wall-map of the state of California. It was studded with pins, some with red heads, some with blue, some with black—hundreds of them. Michaelson made a dramatic gesture, and his eyes blazed.

"Each of these pins," he said, "represents a packing house or cannery where the fruit and vegetable pro-

ducers of California depot their produce for shipment. The Pacific Pine Shook is their organization for buying box and crate material to ship in.

"And sixty thousand growers, with lands worth a cool billion dollars, and with annual crops running into the hundreds of millions, are today cringing under the lash of Sill Thurston and his crowd—as much at his mercy as though he owned them as slaves!"

"They can't ship without box shook?" Gantry asked.

"Not one carload."

"Thurston controls the shook market?"

"To the last board."

"And therefore the price?"

"To the fraction of a cent."

Gantry thought a moment.

"What's your program?" he asked, abruptly.

Michaelson struck the table with a clenched fist.

"To break his grip—or make him a present of the fruit and vegetable industries of the state!"

"That's not so much a program as it is a declaration of intention," Gantry suggested. "Have you got money to fight Thurston with?"

"No, we haven't. Parker Forbes told me you were a scrapper, and that you had considerable backing. My idea was that you might be able to swing a shook factory in connection with your operations, with a contract from us." The crusader paused, doubt registering for the first time. "Don't tell me you can't—or won't!" he exclaimed.

"I would if I could," Gantry said, instantly. "You've given me another reason for wanting to put Thurston on his back. Whether I can do it or not is another question. I'll have to see."

Michaelson sat down heavily.

"It's really life or death to thousands of orchardists and vineyardists in California," he said. "The margin of profit in fruit raising is small at best. In the old days, when no grower kept books, it seemed as though they made money, taking year in and year out, because the prices of their land rose steadily enough to give them a capital profit, even if they didn't show a crop profit."

"But now California land generally has reached its highest price—in most cases it's too high. The growers are balancing their accounts—watching costs. And they show a profit so small that a tenth of a cent a pound may make the difference between gain and loss."

"We always got box shook at a fair price, until Thurston and his crowd got complete control. They began to edge the price up. Last spring they shot it up thirty per cent. It means red ink for every producer in the state who has to ship."

"You have to pay cash, I suppose?"

"We call it that. In the fruit business ninety days is cash, because it takes a grower that long to get returns. It's a custom of the trade."

Gantry laughed a little.

"Ninety days is a short time when you're on the verge of ruin," he observed. "It reminds me of a nigger who was sentenced to be hanged. He wrote the governor of the state: 'Dear Guvnor: Dey's fixin' to hang me on Friday, an' hyar it am Tuesday!'"

Michaelson laughed too.

"Thurston's going to hang us next summer—and here it is November," he said, ruefully.

"Never say die!" Gantry exclaimed. "Give me until tomorrow to figure on this thing. I'd like to help you

out, as I've said. It's the biggest thing I've had a chance at—bigger than merely making money. I'll do my best."

They parted—Michaelson hopeful, Gantry thinking hard.

His one hope lay in Clifton Neal, his old college friend, whose connections in San Francisco financial circles were the strongest possible. Neal had turned him down once before because his father and Goodsill Thurston were associated. Perhaps this time—

Neal was cordial, hearty, glad to see Gantry.

But he was as cold as stone to the proposition presented.

Craig Gantry left him after two hours of fruitless pleading, with all his enthusiasm gone—his mercurial spirits at the very bottom.

Angry, disheartened, bitter, Gantry went out into California Street, reckless of everything, tired of the fight, and feeling as though the gods had mocked him with this dream and were laughing at his ludicrous disappointment. In the old days he would have gone deliberately to getting himself drunk. Now he hesitated, peevishly questioning how he would drown his trouble—forget!

A girl, passing, glanced at him, hesitated, looked back, hurried to his side.

"Gee!" she cried. "What luck! I was going to telegraph you tonight."

It was Mellette Robin.

II

I have failed utterly if I have not made clear to you by this time that at his best Craig Gantry was generous, forceful and commendably strong; that at his worst he was spoiled, selfish, vacillating and lamentably—childishly weak.

He had gone to San Francisco expecting to win a contract that would be negotiable for enough money to build a shook mill and, possibly, enough to buy out Fack and get all his milling into his own hands. A few moments with Michaelson had disabused his mind of that notion; there had remained Langnickel, of the Lumberman's Bank in Lassen, and his few—and almost forgotten eastern friends. The latter were too far away, even if he could renew his old contacts there. Langnickel was in as deeply as he could be expected to go. As a last resort Gantry had turned to Clifton Neal and been disappointed.

The edifice of hopes and fancies and dreams he had been erecting ever since his discovery that the Clyde timber could be chuted into Samson Creek from Mary's rock on the bluff came to earth with a crash. Craig had thrown his weakness and doubts overboard that day after the funeral, with Mary playing the little comedy-drama out beside him; Craig himself, at least, had not counted on his own predisposition to the blackest dejection in a time of trouble.

The long and short of it is, at any rate, that when he encountered Mellette Robin, the gutter graduate, Gantry was ready to chuck everything outright. I suppose he might have checked himself before he had gone very far, but that is problematical. When one remembers what he did with his chances before he met Mary Clyde and came under the influence of her father and his "philosophy of effort," doubt arises that his character was

strong enough to make himself pull up short of complete disaster. If most of us in the mountains who knew him had seen him when Mellette Robin found him on California Street, I think we would have wagged our heads and given him up for lost.

We did not know Mellette, then!

III

The girl whom Gantry had befriended when he was a down-and-outer in the underworld of San Francisco recognized instantly, on seeing him, that he was in one of his blackest moods. She had seen them too often in those other days; she understood them and him; she was perfectly capable of handling him when he was in such a state.

Almost without words she turned towards her apartment. On the way she stopped twice to give orders. In an entirely casual way she led him through the empty corridor of the house, opened an automatic elevator door, shot him up to her seventh-floor habitation, and let him in.

Gantry tossed his hat away and held out his arms to her.

To his utter amazement—and he says he never will forget it—she eluded him.

"No, Gee!" she said, in a steady voice. "You've got me wrong. We'll talk that over later. First you're going to tell me what it's all about."

"I don't want to think about it," Gantry said, unevenly. "I'm going to forget it. That's what I came here for."

"You've come to the wrong place," the girl said, smiling.

"Why were you going to telegraph for me, then?"

"Not to make love to me," she replied instantly.

"That's all over with, as I'll tell you later. Right now

there's something big going. Sit down. You know me well enough to know that I mean what I say, Gee. So don't let's waste time."

He flung himself irritably into a chair.

"Go ahead," he muttered, ungraciously.

Mellette slipped out of her street coat and crossed behind him to put it away. Then, just for a breath, she wavered. As she passed behind his chair one hand strayed out to touch his hair. Her face went as white as death. She swallowed—her heart, after pausing, raced again, and the blood flooded her face.

But little Mellette, the gutter-snipe, was no weakling. She conquered herself. It was all over before Gantry could turn. When he did she was catching the coat over a hanger, and her ready smile was masking the longing in her eyes.

"You're a growly old thing!" she said. "But you'll get over that." She returned to a couch in the windows—sat with her back to the light, where she could watch his face. "It's about your lumber business, Gee. I've been looking you up, and I know all about it."

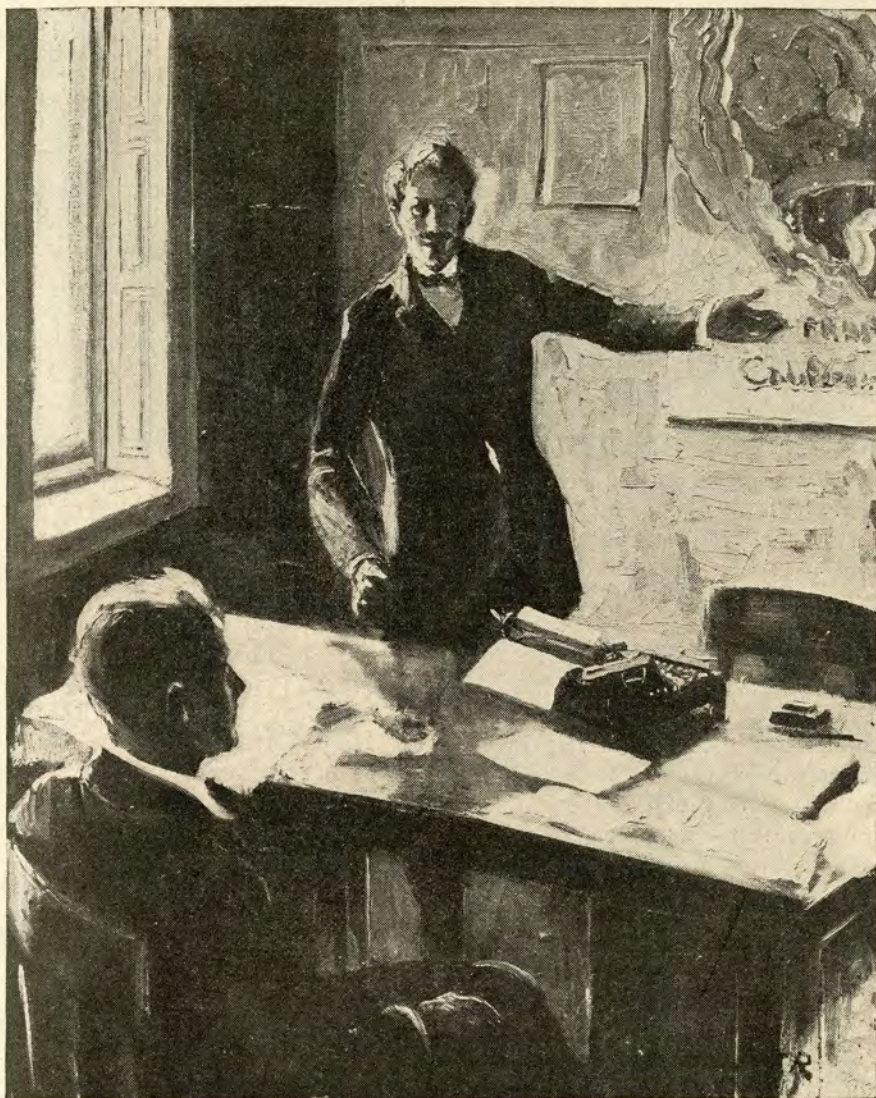
"If you don't know more about it than I do you have wasted your

effort," he said, with his old hollow, cynical laugh.

"I don't think I've wasted anything," she countered. "My boss—I've never told you his name, and I don't need to now—is up to his neck in a lot of projects up that way, and I've had lines laid to get any dope I wanted. I know about Fawcett closing your road, and the Indian Rock railroad raising your rates on you, and your rows with Thurston, the lumber king, and your contract with the Pacific Western, and that you're losing money. You are, aren't you?"

"Yes."

"But you'd clean up if you could lay your stuff down at the railroad construction camps cheap, wouldn't you?"



"What's your program?" Gantry asked abruptly. Michaelson struck the table with a clenched fist. "To break his grip!"

"It would help. What are you driving at?"

"Suppose you had a railroad through Castlemont, Booker and into Lassen, joining the Pacific Western there, and a freight rate for your lumber about one-tenth of what it's costing you now. Would that help?"

"It might."

"Might? I'll tell the world it might!" She wriggled like a child—caught her feet up under her. Her delight and enthusiasm were almost contagious. "Say that it would, Gee, and don't be a gump!"

"Well, it would, then!" he declared. "But there's as much chance of a through line from Castlemont to Paris!"

"Is that so? How do you get that way? Listen."

"I'm listening."

"This job has been moving, under cover, for three years. Last week it got far enough so that it was settled on. It's still a secret, but I can tell you so that you can make plans. I know I can trust you. I was going to wire you to come down—and then I found you on California Street looking like a dick that had bobbed on a big pinch!" She returned to the argot of the streets unconsciously. She almost stammered, so anxious was she to tell her story.

"I'm here, anyway," Gantry said, smiling at her for the first time. "I'm sorry I was cross. Go on, Mellette."

"You couldn't stop me now with a Maxim silencer! My boss has laid out the whole project—I've written all his reports. They're accepted and salted down and the money's in the bank to start the work next month. It's a dry winter—no snow to speak of up above, and probably won't be, the company thinks—and by spring you'll have your road.

"How? Built for you! Why? A power plant on the river eight miles below Castlemont. Now what do you say?"

She leaned back, triumphant. Gantry got it slowly. He began asking questions, with caution. Mellette had all the facts—all the figures. Her grasp of the project was amazing. Her improvement—in speech, manner, understanding, education—is every way—was unbelievable. It seemed scarcely credible that she was the girl for whom Craig Gantry, as G. Craig, had bought cocaine after he had rescued her from a gang of soulless crooks and gunmen, and when he had shielded her from them and from the police with equal vigilance and at an equal risk. He watched her while he interrogated her; there was no question at all that she knew precisely and down to the last penny of money and foot of steel what she was talking about.

"Mellette," he said, at last, "I want to tell you now what this means to me."

He told her of the troubles above, the cost of transportation (at which she nodded sagely), the proposal to manufacture box shooK—the whole story of the greed of Sill Thurston and his crowd and the plight of California growers. And as he talked his own vision quickened. Presently he was talking almost to himself.

For it dawned on him that here was a struggle—here a cause—worthy of complete and selfless devotion, aside from any considerations of profit. It was, he thought, the very sort of project to which Mary Clyde would commit herself enthusiastically. More than any mere dull lumbering enterprise it was an opportunity to serve

the producers of the whole state. It was a species of fight against evil—epic, colorful, and rousing.

"I do not know what the sweat and blood and tragedy of this life mean," he found himself quoting, "if they mean anything short of a fight for God and the universe. It feels like a real fight—as if there was something really wild in the universe which we, with our idealisms and our fortitude, are needed to redeem."

Mellette nodded.

"It sounds that way," she said, breathlessly. "Go on, Gee! What's the rest of it?"

He thought a moment—colored.

"But first of all," he continued, the words of James coming back to him freshly, "but first of all to redeem our own hearts from atheisms and fears. For, as the essence of courage is to stake one's life on a possibility, so the essence of faith is to believe that the possibility exists."

He was standing—almost unconscious of the girl. His face was flushed—his eyes alight. In a flash he had seen something else—a means by which the whole project Michaelson had outlined could be carried out. He laughed aloud. The poetic justice of his new and Heaven-sent inspiration would complete it! Goodwill Thurston should provide the sinews of war for the battle that would exterminate him.

Mellette Robin watched him—waited.

After a moment she said softly:

"Now you're the real Gee I've known was hiding out somewhere always. Now you're going to be glad I made you keep your distance when we came in—because you're going back to that mountain girl—your Mary Clyde—and not waste yourself on anything less. Gee!"

He started, his mind leaping to her words. Kathleen Maynard had been in his mind much in the past twenty-four hours; was Mellette Robin reading his future? Was it Mary Clyde, after all? He had never believed it. He doubted it now.

But he could not say so. His tongue refused to frame the words.

Soberly, a little later, they sat down to the luncheon Mellette had ordered sent in, and at three o'clock he was in the office of the Pacific Pine Shook Distributors again, holding Michaelson breathless while he disclosed, to the finest detail, his plan for the utter vanquishing of Goodwill Thurston.

CHAPTER XVI

I

Craig Gantry spent the whole of that week in San Francisco, writing Mary Clyde a brief note telling her that things were going big, but not entering into details, and responding to Kathleen Maynard's appeal with a long night letter. But he was devoting now all his freshly aroused energies and his newly developed intensity to the multiplex problems that arose from the plan he and Michaelson built up. It was daring—adroit—almost sensational. If it failed Michaelson and his organization, many California producers, Gantry and Mary Clyde would all go to smash together. If it succeeded—

Gantry was convinced it would succeed. His immediate difficulty lay in the fact that it was impossible to reveal to manufacturers of machinery, bankers or supply houses the nature of the program. On its face here was



The three of them had money, and Louis had liquor. For seven solid days they rioted—boasting, quarreling, fighting, making it up, and drinking again.

merely the beginning of a box-shook factory, established to fulfill a contract for a limited amount of shook. And even so it was necessary to move cautiously, for partly the success of the enterprise depended on keeping Thurston and his crowd in the dark. Gantry never worked harder—to that date he had never worked with as much enthusiasm. He was cool, poised, alert, shrewd. He made himself several friends who were to prove extremely useful later on; men liked him and showed confidence in him. It was a new experience for him, and a beneficial one.

On Saturday night, with half a trainload of shook mill machinery on the tracks and ready to move out with the first mixed freight, with a force of men engaged to install the plant, and with sufficient credit established to enable him to swing the project for the first few weeks, he left for Lassen.

II

Parker Forbes listened to his story without a word, though several times during the recital he chuckled, and once slapped his knee and broke into a hearty laugh.

"Go to it, my son!" he said, when Gantry had concluded. "If you skid there's going to be one unholy smash-up along the road, but if you can keep on four wheels I suspect that you'll make Mr. Sill Thurston very ill. You can have anything I've got; I've had reason to accumulate a few grudges against Thurston myself in the past year or so."

"The new arrangement won't change my contract with you, you understand," Gantry reminded him.

"Not unless you succeed," Forbes said drily. "But if you do you'll find that making box shook will pay you better than selling timbers to me. Don't worry, though

—I can always go back to the Granite Ridge outfit."

"There ain't going to be no more Granite Ridge!"

"Well, more power to you. But you haven't won your fight until the last bell rings, Craig."

Langnickel, the wary, blunt, shrewd little president of the Lumbermen's National, was non-committal on the project, but partly that was because Gantry chose to tell him only half the story.

"You're into me pretty deep now, Gantry," the banker said. "I don't say but you've paid up according to the letter; you've been a good customer so far, and I still believe in you. But looks to me like you've bit off a pretty big chaw. You have to creep before you can walk, you know."

"That's true, Mr. Langnickel," Craig agreed. "But I'm looking forward to having my first long pants pretty soon now."

"Your chest is man's-size, anyway," Langnickel replied, with a giggle. "And if you get to wobbling I'll see what I can do to help catch you, my boy!"

The bank president undertook to find three or four shook-mill operators for the new enterprise; he could make inquiries without arousing the talk and suspicion Gantry would; in short, the young lumberman was pretty well pleased with his circumstances when he went, in the afternoon, to visit the hospital where Noel Thomas' loggers had been taken after the accident in the Clyde timber the month before.

To his surprise all of them had been discharged as cured save one. Spud Killiam, the donkey tender, had dislocated or displaced a cartilage in his spine, and only the most assiduous care and the most skillful manipulation had saved his life. The surgeons were hopeful now, he told Gantry, that he would be able to walk one day; in the meantime he was (*Continued on page 90*)



The DINNER TABLE

— Conducted by Jane Randolph

Making Whole Wheat Bread Is Easy

MANY of the inquiries that have come in this month show a decided interest in finding out the right things to eat, rather than a desire for recipes for unusual or elaborate dishes. This is exactly what I like, and I believe the best thing that I can do will be to tell you how to make your own whole wheat bread.

There are thousands of American families who would break away from the white bread habit if they either knew where they could buy real whole wheat bread or if they knew how to make it. Especially if they knew how *easy* it is to make it.

Except in a few large cities and in the neighborhood of a few sanitariums, whole wheat bread can't be bought. Ninety-nine per cent. of bakers don't know what it is, and the article they sell as graham or whole wheat bread is simply the old pernicious white article, adulterated with a few tablespoonfuls of bran and a dash of molasses for color.

For the average American family, therefore, there is just one solution—make it at home.

But here again arises a difficulty. Not only is whole wheat bread not to be had, but whole wheat flour, the 100 per cent. article, can't be found in most grocery stores. A few city stores carry it, but small town stores usually have never heard of it. It is therefore a double problem! First, getting the flour, and second, making the bread. No wonder the average busy woman, already driven to the wall with her housework, has neither time nor inclination for pioneering in such a field.

I found myself confronting precisely that problem. But the health of my family was in a critical state; something had to be done, and I went at it. I got my flour, I experimented with recipes, I plowed through failure after failure, and I won. I write this in the hope that others may profit by my mistakes and arrive quickly and easily at the goal I found with such difficulty.

Getting Real Whole Wheat Flour

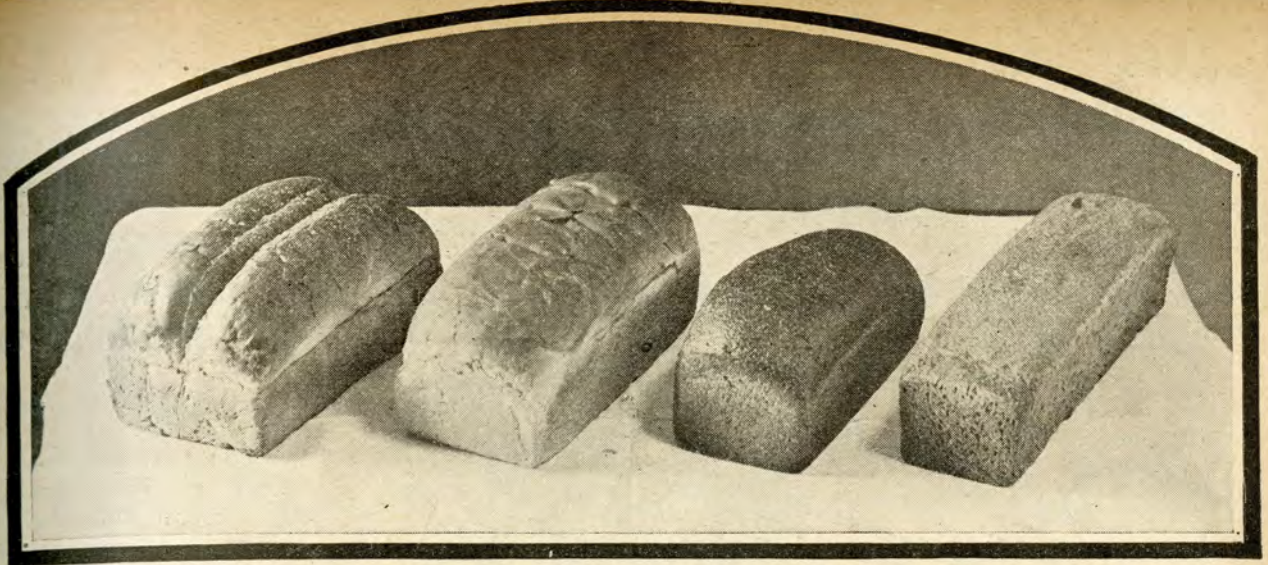
First, as to getting the flour. That is really more of a problem than making the bread—not so much because the flour is hard to get, as because most women have the mistaken notion that they must economize. Let me say at once that whole wheat bread on any basis is one of the cheapest foods in the world. Don't balk at any expense, therefore, in getting the flour.

One way to get it is to order it yourself or have your grocer order it for you from some firm like the F. H. Bennett Biscuit Company of New York, makers of Wheatsworth, or the Great Valley Mills at Paoli, Penn. Or maybe there is a mill near your home, in which event you can have them grind it for you there. Still another way would be to order a small grinder of your own and grind the wheat yourself. Only in that case you can't be so certain of your product. There is a great difference in flour and the way it behaves when made into dough. In working out this recipe I used Wheatsworth. If you get some other flour you may have to change the amount to more or less, according to the way the flour is ground, whether fine or coarse, as well as the quality of the wheat.

When I began, I asked for it in one store after another. Many had nothing but white flour, while a few had a substitute which of course they assured me was "just as good" because it had only a part of the bran and middlings removed. I finally found the real article by driving twelve miles for it to a nearby town. When I saw it on the shelves I asked the clerk for twelve packages, and he almost fainted. Accustomed as he was to selling it to old maids and invalids for breakfast muffins and puppy biscuits, he must have thought—well, what he said was, "Shall we deliver it? And what is the address of the institution, Ma'am?" "No," I replied, "I will take it in my car. And it is not an institution, it is a family of four looking for enough to eat. You may order two more cases of twelve packages each and I will call for it in about three weeks."

The expression on his face said more plainly than I liked, "A lunatic at large," and I got out as soon as possible.

Having found the flour, the next thing for you to do is to make the bread. That is easy. It is so easy that a mere man can do it. If he is a bachelor and can't get it, or if he is a married man and in difficulties with the cook, he can still have it. He can make it for himself. Now I know that doesn't sound one bit reasonable. We have always regarded the art of bread making as a very elaborate and difficult process. Our grandmothers made it just that. And how we do cling to the virtues of our ancestors instead of getting busy and developing a few ideas of our own. As a matter of fact there is no trick at all to the art of making whole wheat bread. And it doesn't take very much time. Not half as much as most mothers spend making hot biscuit and lemon meringue



You can't judge bread by the size or looks. Here are four loaves. The first two are standard bakers' white loaves weighing a little less than a pound and a half each. The compact third loaf is Ward's Homespun, an honest commercial whole wheat bread very popular in and about New York City, weighing about a pound and a half and costing fifteen cents. At the extreme right is Mrs. Jane Randolph's home-made whole wheat bread described in this article, weighing about two and a quarter pounds and costing about eighteen cents to make. The long narrow loaf "bakes through" more readily. The growing popularity of whole wheat bread is seen in the fact that various bakers producing an honest and first class whole wheat bread are now selling a million loaves a week in and about New York City, meaning a million and a half pounds.

pie. If you have the materials and a few necessary utensils, all you need do is to follow the directions.

In talking with Mr. McCann about whole wheat bread, I asked him if it would combine with milk to make a complete and balanced ration. His answer was characteristically reserved and yet illuminating. He said that such a combination would be almost a complete food, but that it would probably not contain quite enough iron to keep the body in its very best condition, and it is never wise to rely entirely on one or even a very few foods. There is still so much to be found out about food, especially the elusive and mysterious vitamins, that it is best to be on the safe side and eat as large a variety of good foods as possible, and so run no risk of leaving out anything which the body needs.

But he added that with whole wheat bread one need worry much less about the remainder of the diet, especially if milk could be had in abundance. In short, with plenty of real whole wheat bread as the mainstay, by far the biggest problem of the balanced ration is settled.

Now, after three years of experiments, blunders and successes, baking three times a week for my family of four, here is at last the very simple way in which I now make my own whole wheat bread. You will see that making bread is not necessarily the formidable task that it was according to some of the old baking methods.

Recipe for Whole Wheat Bread

- 3 yeast cakes dissolved in
- $\frac{3}{4}$ cup lukewarm water;
- 2 cups water, boiling hot;
- 2 cups fresh, whole milk, cold;
- $2\frac{1}{2}$ tablespoons salt;
- 3 tablespoons dark brown sugar;
- 3 tablespoons melted shortening (must not be hot) or vegetable oil;
- $3\frac{3}{4}$ pounds whole wheat flour.

Most of the flour comes in $3\frac{1}{2}$ pound packages, so the easiest way is to use one full package and one rounded cupful besides. This saves all bother of weighing or measuring.

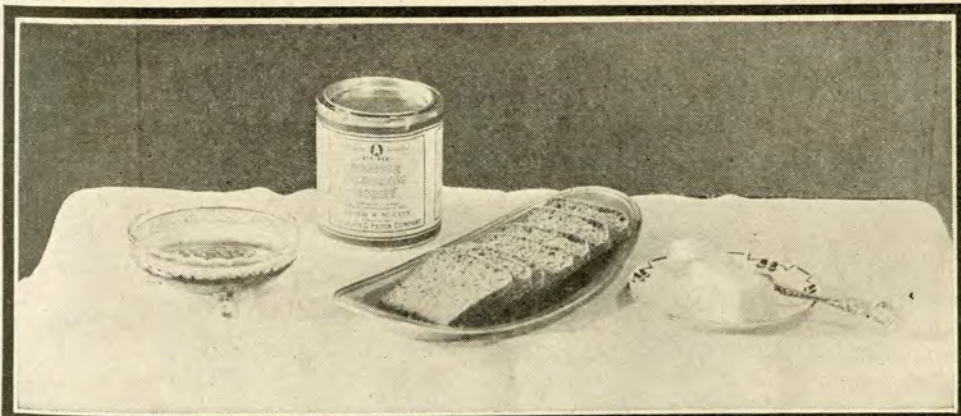
All other measurements are level.

To Mix:

After the yeast is dissolved in the lukewarm water (it will take about ten minutes), pour the boiling water and the cold milk together into the bread mixer, thus making a lukewarm mixture to which add the dissolved yeast. Then add the other ingredients in the order given.

Turn the mixer seven minutes. Then lift out the dough one-third at a time and roll it about in the hands, shaping it into loaves and put it into three well greased pans. Grease the top of the loaves.

(Continued on page 74)



Whole wheat bread with good butter and honey makes a complete meal in itself. The only thing that might advantageously be added to this picture is a bottle of milk.

Can You Write a Better Letter Than This?

Tell Your Personal Experience in Building Health and Strength, and Help Us to Help Others

My Experience With T. B.

To the Editor:

After reading three of Mr. McCann's articles in STRENGTH Magazine I feel it my duty to write you concerning my experience with T. B. During the month of November, 1923, I broke down with a case of what the M. D.'s said was pulmonary tuberculosis, and I guess I had some lung trouble, as my weight went down to 103 pounds. I could not sleep nor eat and coughed a great deal. Formerly, about twelve years ago I had had a bad spell of dry pleurisy in my left side. About two weeks later my right lung became congested. Seemingly I recovered from these old attacks of pleurisy.

Now back to November, 1923. The doctors advised me to go to a sanitarium. Well, I went to a place in South Carolina and found that I had made a fatal mistake the first day I arrived there. The food was not fit to make a hog grain fat—white rice, bleached hominy grits, white bread, and everything that would stick paper on the wall. So I stayed in the sanitarium down there for seven weeks, at a loss to myself in flesh as well as a financial loss.

Take this from me, I did not worry. I was gaining the knowledge that I needed. I knew that I was not getting the food that I needed. After reading one of Mr. McCann's articles in STRENGTH I dismissed myself from the grafters in South Carolina and came back to my home and tried a diet of whole wheat, brown rice, brown bread, eggs, milk, honey, dates and prunes, all containing lime in its organic state.

I have gained twenty-one pounds in eight weeks, and I feel that I am eighty-five per cent. cured. I work every day now.

O. S. G.

Yours,
One man who can write a better letter is the original writer of this letter, and we hope that we will hear from him as soon as he sees his letter reproduced.

If this letter had gone on to tell what his present daily program is and what his future physical improvement plans are, it would have been invaluable to many readers of STRENGTH as a picture of what can really be done with the human body under even the most trying circumstances.

Many readers of STRENGTH could write such letters from their own personal experience.

Of course they might cover anything from the cure of constipation to the gaining of great strength. All such stories are of great value, and we feel that your story could benefit many people who, like yourself, are in need of physical betterment, because it will show how one man obtained this physical betterment.

No one gets anything in this life without working for it, and the greatest incentive

for keeping people working is the knowledge that the pursuit of the same course has given others real results.

Any one who has gained health owes it to the people in the same condition in which he formerly was to tell them his story, so that they may gain the benefits of his experience and the incentive conveyed by his success.

If you are one of the many readers of STRENGTH who has gained health or physical perfection, the least you can do is to write and tell us about it, so that we can pass the good word along to the many who are now trying to get into your class.

Of course all such information will be considered confidential by us unless you are willing to make your name public, and equally, of course, we must prefer that you should not remain anonymous.

We will pay for all material which we will be able to use at our regular space rates.—THE EDITOR.

IF this were a really good letter it would tell us three things:

1. Where the writer started.
2. What he did.
3. Where he is today.

This letter really answers satisfactorily only one of the three questions. His height, former weight, occupation

and reason for being in this condition are all omitted and all of vital interest to any study of tuberculosis.

When a man realizes that he has T. B. and makes up his mind to fight it, he soon finds that there are several generally accepted things that he should do. Our friend should have given us this information, including his reason, since he was going away, for not going to Arizona, where victims of this disease usually go.

That rest is part, almost the whole of the first part of the cure of T. B. is certain, and that he got a rest in South Carolina we are sure. He should have given the sanitarium this credit.

We will bet that when he went home and went on a correct diet he stuck by the information that the sanitarium gave him about rest, and we know that he now must realize the importance of rest in curing tuberculosis.

THE MAT

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

Conducted by Alan Calvert

Strength of Hands and Grip

Kingsport, Tenn.

Editor of "The Mat."

Dear Sir:

A subject in which I am very much interested is "hands." The reason for this is my own hands, which I believe are exceptionally large, as is shown by the photo of me holding out the basketball by a grasp on the upper part of the ball. These hands of mine have helped me in lots of ways. They were the deciding factor in my enrolling for your course, as I wanted something to back them up, as it were. And with their help I have secured the reputation of being the best high school forward passer in East Tennessee. Understand that I am not writing this just to be writing about myself, but to explain my interest in hands. Perhaps you could discuss these very important parts of our bodies sometime in your department of Strength, "The Mat."

Your loyal pupil,

E. BLANKENBECLER.

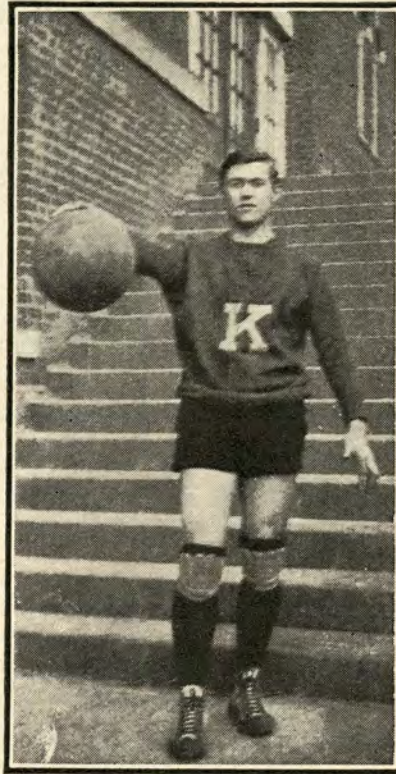


Figure 1. Mr. E. Blankenbecler demonstrating the size and power of his hands by holding out a basketball, taking hold on top.

THERE is absolutely no question as to the advantage of big hands in many branches of athletics. In professional baseball it is admitted that a player with unusually small hands works under a distinct disadvantage. These writers have a habit of saying that the player has "a wonderful pair of hands." Sometimes they mean that the player is very adept with his hands; at others, that his hands are immune to injury; but usually they mean that the player's hands are unusually large. A third baseman or a pitcher finds big hands a distinct asset. Since most players bat right-handed, the third baseman gets most of the hardest-hit balls. If he is playing in close for a bunt, and the batter takes a terrific swing, the ball will come down towards third base like a streak of lightning, and the baseman has to make a snatch or a grab to get it. If his hands are big, he has a better chance of intercepting and holding the ball than if his hands are small.

A big-handed pitcher can "put more" on the ball than can his small-handed rival. When the hands are so big that the fingers overlap the ball, it is possible to put an unusual twist on the sphere as you deliver it. Few pitchers have as wide or as sharp breaking curves as the late Rube Waddell, who had enormous hands.



Figure 2. John Marx, an example of a man capable of exceptional feats by reason of his unusual hands

About Waddell's time there was another pitcher, named Virgil Garvin. He came from Texas, was about 6 feet 6 inches tall, and his hands were so big that he could hide a baseball in the palm of his hand about as easily as the average man can hide a golf ball in the same way. He had probably the most wonderful assortment of curves ever seen, but he lacked control.

I know very little about basketball, but I can readily see that big hands would help a player of that game. The picture of Mr. Blankenbecler shows him holding a basketball by the top grip, which would seem to be a stunt possible only for a man with big hands, and that this man's hands are big you can easily see by looking at the left hand in the photograph.

In modern football there is a great deal of forward passing, and when I went to see a game last fall I was amazed at the distance and the accuracy of the passes. Twenty-five years ago a football player when making a pass would hold the ball by one end and deliver it with a whirling motion end over end; and anybody who could pass a football forty yards was considered a marvel.

I am told that nowadays some of the players make passes of seventy-five and eighty yards, and I notice that they hold the ball in quite a different way. They grip the ball around its equator, and throw it end-forward, very much as a javelin is thrown. "Brick" Mueller, of California, using this method, is said to have passed the ball 100 yards. It seems to me that a small-handed man would have great difficulty in controlling the flight of the football when making the pass; whereas a large-handed man, whose hand was so long that it partly encircled the ball, would be able to deliver it with a twist, which would make it spin like a rifle ball.

In wrestling a large hand and a strong grip play an important part. If your hand is so big and your fingers so long that your grasp nearly encircles your opponent's arm, you have a much better chance of holding him firmly than if your hand is small. Wrestlers perspire very freely, which makes it even harder for a small-handed man to fasten a grip on his opponent. Cyclops (Bien-

kowski), who broke coins with his fingers, had an immense hand, and his grip was so terrific that if he entered in a wrestling tournament the other men would insist that Cyclops be forbidden to use certain holds, because the strength of his grip was so prodigious that he could almost paralyze his opponent by grasping him in a certain way.

In weight-lifting the big-handed man can do some stunts which are beyond the power of the man with small hands. John Marx, Figure 2, who stood 6 feet in height, had a hand fifty per cent. bigger than the average. In his exhibitions he would use bar-bells with very thick handles. These bells were not very heavy, and many other athletes could have pushed them to arms' length above the head, if they had been able to lift them as far as the shoulders. To lift a 200 pound bar-bell with both hands to the height of the chest is fairly easy, if the handle is less than $1\frac{1}{4}$ inches thick, but when a bell of that weight has a 3 inch handle (which was the size in Marx's bells) then it cannot be lifted by *any* small-handed man, no matter how strong his grip. Mr Blankenbecler would have a very much better chance of raising Marx's bell than, for instance, Robert Snyder, who has very small hands; although Snyder, who is an expert, is considerably stronger than Mr. B., who has had only a few months' training.

Marx got a big reputation as a bar-bell lifter by reason of his big hands. He was a big man and undoubtedly very powerful. He was a splendid back-lifter and harness-lifter, but he does not hold any of the records for bar-bell lifting, although his records with thin-handled bells were very good. Professor Des Bonnett had in his gymnasium a bar-bell with a thick handle, and only two or three men could even budge it from the ground when they used but one hand. Marx lifted it two feet from the ground, and Apollon picked it up and threw it backwards over his head. Apollon was a giant who had a 16 inch forearm, and when you find a forearm of that size you find a *very* big hand at the end of it. In the same way, when you find a big hand it is always attached to a thick wrist, so that a big-handed man has a fine chance to get a wonderful forearm. There are many tall boys of sixteen to eighteen years of age who have very large hands and feet, and their friends are apt to say, "Bill will be a tremendous man if he ever grows up to his hands and feet." In many cases Bill does just that thing.

All this is discouraging to the man who has normal-sized hands. It seems as if it would be a waste of time for him to train industriously to develop the strength of his hands, wrists, and forearms, and then to be outdone by some other chap who has never trained, but to whom nature has presented a pair of large-sized hands. In this respect, as in many others, knowledge helps to overcome natural disadvantages.



Fig 4

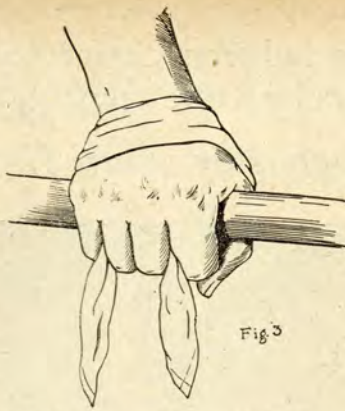


Fig 3

Illustrating the reinforcement of the strength of the grip by the use of a twisted handkerchief in the manner described by the author.

if your back is very strong, your lack of gripping strength will prevent you from making the lift. When the fingers are outside, then press the thumb against the bar, and thus enable you to exert the full strength of your grip. Adolph Nordquest used the "thumb-in" grip when he lifted 700 pounds from the ground.

A small-handed man is at no disadvantage in the "hand and thigh" lift, because when the hands are properly placed the weight presses them into the upper part of the thighs. You will find pictures of that kind of lifting in my article elsewhere in this number.

Men who earn their living with their hands have, as a rule, bigger hands and thicker wrists than men who work in stores or offices. Their hands are bigger because they use them more. Any man whose hands are small can increase their size and the strength of his wrist by exercises which develop great gripping power. Lifting weights from the ground with one finger at a time, and chinning the bar with one finger of each hand (instead of using the full hand), will stretch the hands and make them larger. To make the hand *firmer* you should support your weight on the tips of your fingers and thumbs when doing the floor dip. (The customary way is to put the palms flat on the ground, but if you support yourself on the finger-tips the hands will become much firmer, as well as larger.) An easy way to stretch and strengthen the hands is to hook your two middle fingers together, place the hands in front of the chest, and then pull. Then do the same thing with the two forefingers, and the other fingers in turn.

Henry Steinborn has not very large hands. They are wide and thick, but the fingers are not longer than the average. He can lift more weight from the floor to the chest with one hand and can snatch more to arms' length than any other lifter. He always uses the "thumb-in" grip, and states that by this method he saves a lot of strength. If he kept the thumb out he would have to grip the bell very tightly with his fingers. When he puts the thumb in, the handle of the bell rests on his thumb; he does not have to bother about gripping the bell so tightly, and so can

(Cont. on page 72)

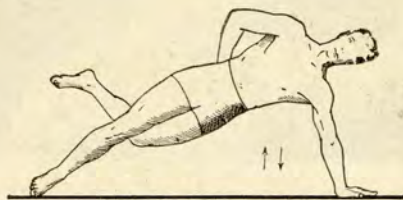
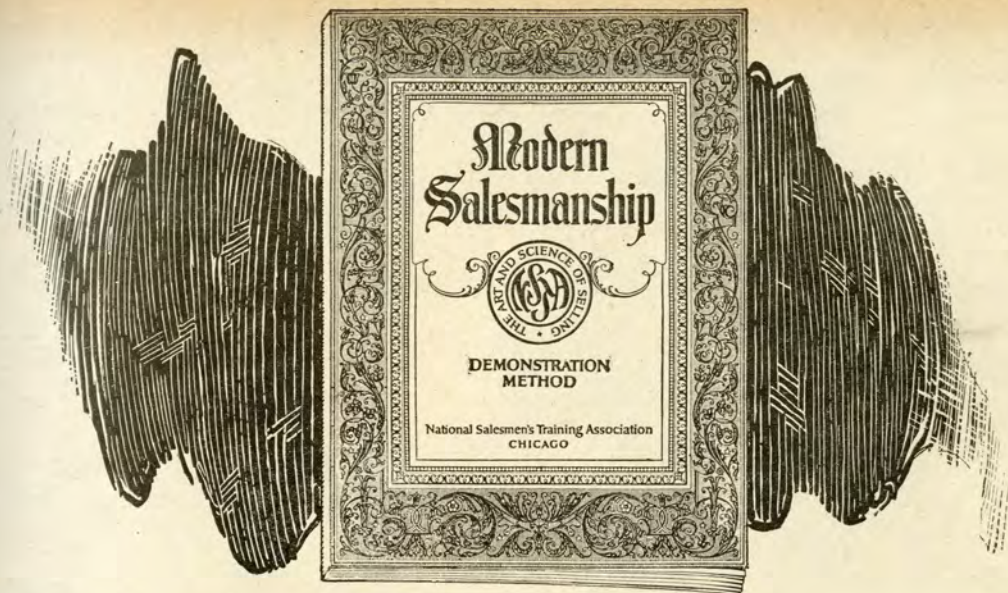


Fig 5



Fig 6



NOW FREE!

The Book That Has Shown Thousands the Way to Amazing Salary Increases

TAKE this situation. A man who had worked all his life in a routine job at low pay suddenly surprises his friends by moving into a better neighborhood, taking a big house, buying a car and blossoming out as a well-to-do and influential citizen in his new community. How did he do it? What is the secret that is used? Simple enough. He knew that the biggest money in business is in selling, and though he felt that he couldn't sell a thing he learned the secrets that make Master Salesmen, and then began to make big money.

If only one man had found inspiration enough in this remarkable book to make a brilliant success in the selling field—in a job paying him many times his former salary—then you might call it luck. But thousands have done it.

Your One Chance to Make the Biggest Money of Your Life

Not one of the men whose names appear at the right had ever sold a thing before—not a dime's worth.

If you had told one of them that he could sell he would have laughed at you.

They were frankly skeptical. Yet every one of these men, through reading this book, discovered the fallacy of this vicious old idea that Salesmen are "born." They learned that *Master Salesmen are made!* And in this book they found a comparatively easy way to go from low pay to better earnings.

Simple as A B C

Sounds remarkable, doesn't it? Yet there is nothing remarkable about it. There are

certain ways to approach different types of prospects to get their undivided attention—certain ways to stimulate keen interest—certain ways to overcome objections, batter down prejudices, outwit competition and make the prospect act. If you will learn these principles, there is awaiting you a brilliant success and more money than you ever thought of earning. This book, "Modern Salesmanship," tells exactly how the National Salesmen's Training Association will make you a Master Salesman.

As soon as you are qualified and ready, the Employment Service of the

National Salesmen's Training Association will help you to select and secure a selling position as city or traveling salesman.

Now Free to Every Man Who Will Act at Once

We are not making any extravagant claims about what we will do for you. We don't have to. The records of the real successes for which we are responsible are so overwhelming a testimonial of the fact that any man of average intelligence can become a Master Salesman that we are willing to leave the decision entirely to you. All of this proof and many important features about Salesmanship are contained in "Modern Salesmanship." It is yours—FREE. Send the coupon for it today. It will show you how you can quickly become a Master Salesman—a big money-maker. It will tell you about the National Salesmen's Training Association system of Salesmanship training that has meant prosperity to so many thousands of men—about the National Demonstration Method that gives you actual experience while studying—and all about the fine opportunities that await you in the selling field. Failure to act may mean that you lose the one big chance of your life to leave forever behind you the low pay of a routine job. It may mean the difference between this and a real success at a big salary. Is it worth 2c to find out? Then mail this coupon NOW.



National Salesmen's Training Association
Dept. 21-X

53 W. Jackson Blvd. Chicago, Illinois

National Salesmen's Training Association
53 W. Jackson Blvd., Dept. 21-X, Chicago, Ill.

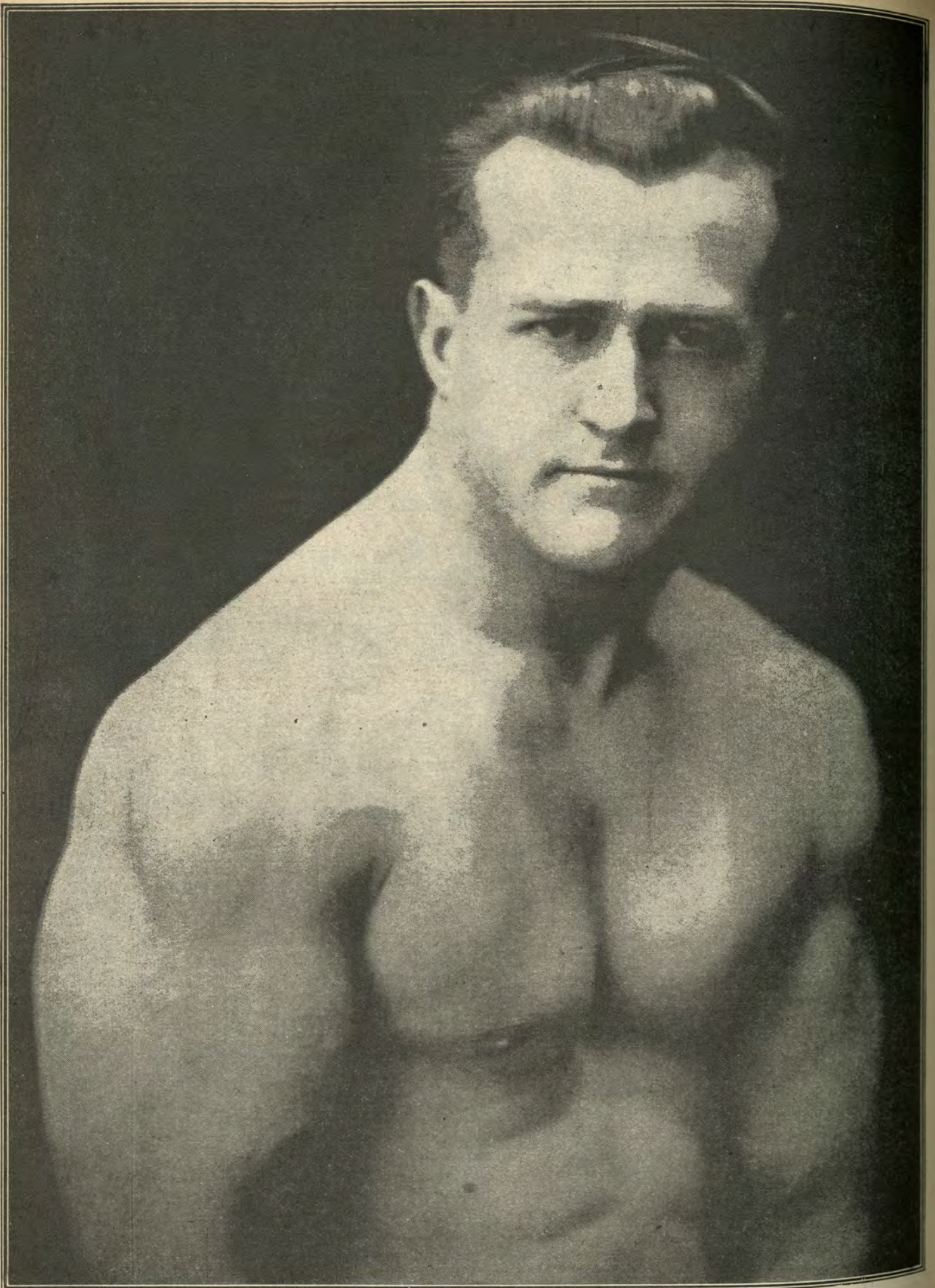
I simply want to see the facts. Send me FREE your book, "Modern Salesmanship," and Proof that I can become a Master Salesman.

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

Read!

Charles Berry, of Wintersel, Ia., stepped from \$18 a week as a clerk to a position making him \$1,000 the very first month. J. P. Overstreet, of Denison, Tex., read this book, left a job on the Capitol Police Force, and in six weeks earned \$1,800. F. Wynn, Portland, Ore., an ex-service man, earned \$554.37 in one week. George W. Kearns, of Oklahoma City, found in this book a way to jump his earnings from \$60 a month to \$524.00 in two weeks, and C. W. Campbell learned from it how he could quit a clerking job on the railroad to earn \$1,632 in 30 days.

EMPLOYERS are invited to write to the Employment Dept. of the N. S. T. A. We can put you in touch with just the men you need. No charge for this service to you or our members. Employers are also cordially invited to request details about the N. S. T. A. Group plan of instruction for entire sales force. Synopsis and charts sent without obligation.



EARLE E. LIEDERMAN
The Muscle Builder

RIP OFF YOUR SHIRT

and get on the job. Work up a sweat and chase those disease bugs out of you. Gee, but they're happy with the chance you're giving them. Are you going to loaf around and let them eat up all your pep? Snap out of it, fellows. You're just digging your own grave when you refuse to exercise. Sitting back in a rocking chair and smoking your old Jimmy pipe may feel fine to a lazy man, but it sure raises havoc with your chances for a long life or a successful one.

Who Will Help You?

I know you think you know all about it. Most everyone you meet tries to tell you how, but they can teach an oyster how to sing quicker than they can show you anything about muscle building. If you are in legal trouble, you seek a lawyer. If you are wise, you get the best, for they are the cheapest in the long run. Now, how about that body of yours? Do you realize it is the choicest possession you have on earth? Don't be a plain dumb Dora! Use your head. This is vital with you. Muscle building is one of the trickiest studies on earth. I've worked at it ever since the day I left High School, so I ought to know. I've seen many a poor chap literally ruined by the wrong kind of guidance. On the other hand, I've seen human wrecks transformed into human Hercules by being started in the right direction.

I've Got the Works

Come to me and I'll shoot you so full of strength and vitality you'll think it's your birthday. I'm the man that first guaranteed one full inch on your arm in 30 days. And I'm the man who does it. I'll fill out that chest so that it will take a man's size load of oxygen, shooting life into your blood and building up your whole body. I'll put a pair of arms and shoulders on you that will carry the kick of a mule. I'll shoot a quiver up your old spine and put a spring into your step so that you will feel like fighting a wildcat. This is no idle prattle, fellows. I don't promise these things—I guarantee them. You don't take any chances with me. I've got the works and I'm willing to prove it. Come on then—let's go.

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

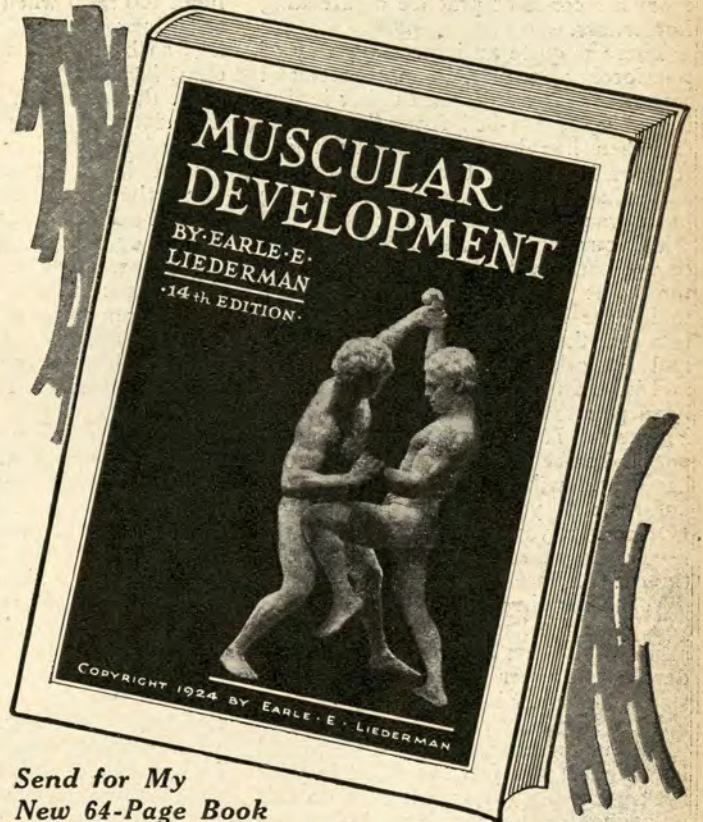
1st prize	\$1,000.00
2nd "	500.00
3rd "	300.00
4th "	100.00
To the next ten pupils, \$10.00 each	100.00

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.



Send for My
New 64-Page Book

"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 these came to me as pitiful weaklings, imploring me to help them. Look them over now and you will marvel at their present physiques. This book will prove an impetus and a real inspiration to you. It will thrill you through and through. This will not cost you one penny. **I want you to have it with my compliments.** It is yours to keep. This will not obligate you at all, but for the sake of your future happiness and health, do not put it off. Send today—right now before you turn this page.

EARLE E. LIEDERMAN

Dept. 707

305 Broadway, New York City

I t I s F R E E	DON'T	EARLE E. LIEDERMAN
	SEND ONE	Dept. 707, 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."
	YOUR	Name.....
	NAME AND	Street.....
	ADDRESS	City.....State.....
	ON A	(Please write or print plainly)
	POSTAL	
	WILL DO	

The Mat

(Continued from page 68)

devote his energy and attention to the act of pulling the weight to the shoulder, or to arms' length overhead. The only disadvantage I can see, is that he developed a large callous on the inside of the right thumb. In the same way, John Marx had big callouses on the palms of his hands, which came from his constant practice of breaking horseshoes.

There is quite an interesting way of reenforcing the grip by artificial means. This can be used either in lifting a heavy bar-bell from the ground or when hanging from the swinging ring or horizontal bar. First, roll up a handkerchief diagonally. After you have grasped the handle of the bar-bell with your right hand, lay the middle of the handkerchief across the back of the right wrist. Pass the two ends under the bar, and then slip one end between the first and second fingers, and the other end between the third and little fingers. Then with your left hand pull the handkerchief tight, as in Figure 3. If you are able to lift a 200 pound bar-bell off the floor with one hand, you will find that with this reenforcement you can lift 300 pounds. (Of course, you will have to press the fingers together as well as gripping tightly.)

When hanging from a swinging ring you place the handkerchief in just the same way. One of the easiest ways to develop the upper back and increase the size of the chest is to hang by *one hand* from a swinging ring. The trouble is that your fingers will commence to slip long before you feel the effect in your back-muscles. (It is better to do this on a ring, because the ring is only about an inch thick, whereas a horizontal bar is apt to be more than one and one-half inches thick.) If you use the handkerchief in the manner shown, you will find that you can hang by one hand from a ring two or three times as long as you can by your unassisted grip. This does not seem to have much to do with the size of the hands, except that it may be of some assistance to those of you who have small hands. My experience is that when you start to discuss one part of the body you soon involve other parts of the body, just as I have had to do here.

Can You Straighten Bow-legs and Knock-knees?

I continue to receive many letters asking me to suggest exercises to cure bow-legs and knock-knees. Sometimes I think that about a quarter of the readers of this magazine must suffer from one or the other of those troubles. I wrote on the subject a year or so ago in this department.

Straight legs add greatly to the appearance of the figure, but a slight bend in the legs is not necessarily prejudicial to either one's health or strength. Many people are unnecessarily sensitive about the lack of

straightness in the lower limbs, and some of those persons simply *imagine* that they are knock-kneed or bow-legged.

Bow-legs come from two causes. In a person with real bow-legs the bones in the leg below the knee are curved outwards as a result of using the limbs too soon when an infant. I have seen four year old children with the legs so badly bent that the knees were eight inches apart. In the bow-legged adult the knees are apt to be not more than four inches apart, and cannot be pressed together. If this condition is caused by a curve in the lower leg bones there is no cure except to break those bones and reset them, and even that is only a partial cure.

Once we held a discussion in this department to decide whether bow-legged men were, or were not, stronger than the average. Some men who are slightly bow-legged are enormously strong. Later on I will try to explain why this is so.

Once in a while you see a man or boy whose knees are in normal position, but who have a large space between the thighs, as in Figure 4. These men are not bow-legged. The queer appearance of the legs is due to the fact that they have no muscular development on the inside of the thighs; that is, the adductor muscles lack size and shape. When the legs are symmetrically developed, the thighs should touch when you stand with the heels and knees touching. (The only place where they do not touch is about four inches above the knees at the spot above the internus vastus and below the adductors.) In some such cases the knees are further apart than they should be, but they can be brought into the proper position by developing the adductor muscles. The way to do it is to lie sideways on the floor and support your weight on the palm of the left hand and the *inside* of the right foot, as in Figure 5. Then you bend sideways and let the left hip touch the ground. Then you raise the body again to the straight line by pressing hard against the floor with the inside of the right foot. This exercise can be made more severe by placing the inside of the right foot on the seat of a chair instead of on the floor. To develop the inside of the left thigh you have to exactly reverse the position. This exercise will cure mild cases of bow-legs, because as the "adductors" on the upper inside of the thighs become bigger and stronger, they will not only make that part of the leg bulkier, but they will also tend to pull the leg bones into the proper position.

Knock-knees are a sign of weakness. I have never seen a knock-kneed "strong man." It frequently happens that a knock-kneed person has a shambling walk, whereas a man whose legs are slightly bow-legged is apt to have a vigorous walk. A large percentage of cases of knock-knees come

from improper habits of standing and walking. When you walk you should point your toes forward, and you should rest your weight slightly on the outside edges of the feet. The practice of "turning the toes out" promotes a knock-kneed condition.

If, when standing and walking, you rest your weight on the inside edges of the feet, the knees will come closer together. If you rest the weight on the outside edges of the feet, the knees are pulled away from each other. Positively there are some people whose joints are so loose that when standing or walking their ankle and knee joints seem to sag inwards, as in Figure 6. By taking exercises such people could make their joints more firmly knit. If you happen to be slightly knock-kneed, just try this trick of bearing your weight on the outside edges of the feet, and see how your legs immediately straighten themselves. The act of standing and walking properly will develop the muscles which hold the leg bones in alignment, and I feel sure that most cases of knock-knees can be cured simply by learning how to place your weight on your feet. I know that keeping your weight on the outside edges of the feet develops all the leg muscles, and that, in my opinion, is why the slightly bow-legged men are apt to be above the average in strength. Their habit of walking has developed all their muscles, and has, consequently, given them a degree of strength which is never possessed by men who are knock-kneed.

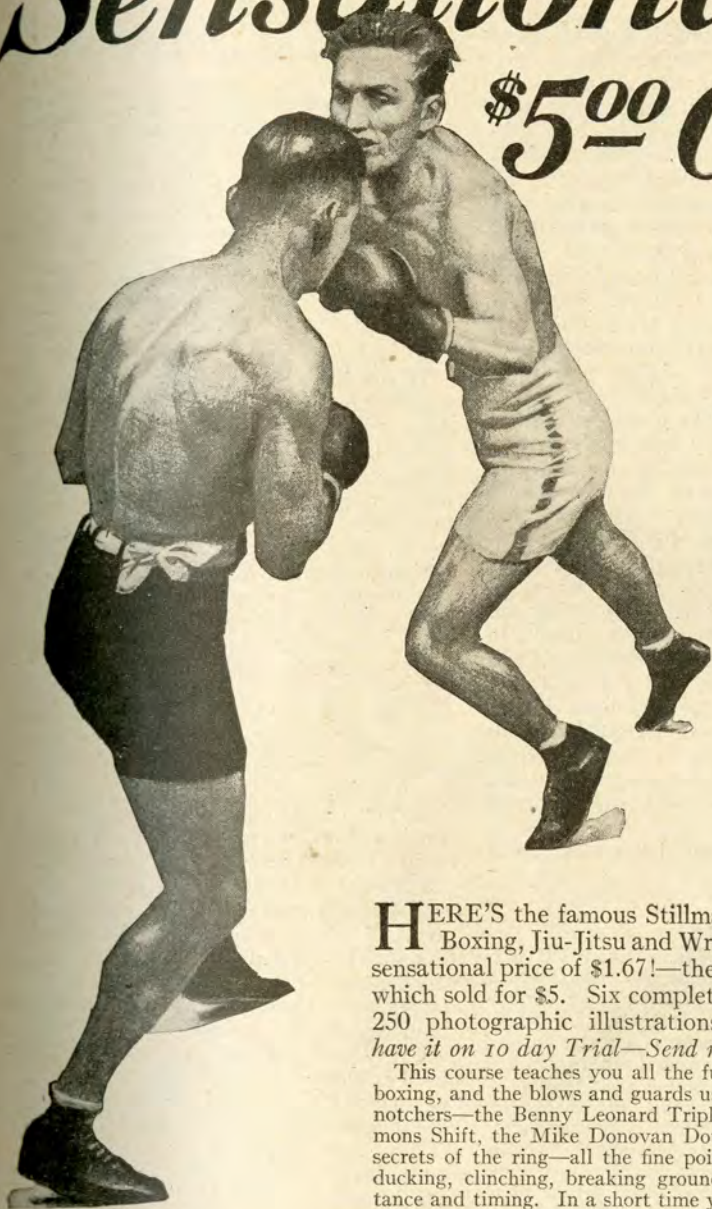
If you think you must have an exercise to cure knock-knees, all you have to do is to vary the exercise shown in Figure 5, but in this case you rest your weight on the palm of your left hand and the *outside* of the *left* foot, and when you straighten the body you press against the floor with the outside of the left foot, and use the corresponding position when you exercise the muscles on the outside of the right thigh.

For the hundredth time I will say that a man who has great muscles on the outside of the thighs is bound to have equally great muscles on the sides of the waist. Those muscles act in concert. The best proof of this is in the development of those lifters who specialize on the one-arm "bent press."

If you are truly bow-legged there is practically nothing that can be done. If you are mildly bow-legged, or if you only *think* you are bow-legged, all you have to do is to develop the adductors of your thighs. Personally, I think a man should be much more ashamed of being knock-kneed than of being bow-legged. Fortunately, knock-knees are easy to cure. Knock-knees give a feminine appearance to the figure. In a man the hip-bones run almost in a vertical line, but in a woman the thigh-bones incline outwards from the knees to the hips; therefore, if a man is knock-kneed it gives an appearance of almost feminine weakness to his figure.

Sensational Offer!—

\$5.00 Course now \$1.67



BOXING Wrestling & Jiu-Jitsu

HERE'S the famous Stillman Course in Boxing, Jiu-Jitsu and Wrestling at the sensational price of \$1.67!—the same course which sold for \$5. Six complete books with 250 photographic illustrations. *You can have it on 10 day Trial—Send no money!*

This course teaches you all the fundamentals of boxing, and the blows and guards used by the top-notchers—the Benny Leonard Triple, the Fitzsimmons Shift, the Mike Donovan Double, etc. The secrets of the ring—all the fine points of feinting, ducking, clinching, breaking ground, judging distance and timing. In a short time you will be able to put the gloves on with any of your pals at the club or gym and make "that fellow who thinks he knows it all" look like a novice!

Jiu-Jitsu and Wrestling are included—how to subdue an armed opponent, how to break a strangle hold, how to throw an opponent if he grabs you from behind, and the best wrestling holds—the Gotch Toe Hold, the Stecher Scissors Hold, the Head-lock, etc.

Cuts the Time of Learning In Half

The Stillman system of teaching boxing cuts the time of learning in half. It is based on the methods used by famous Professor Mike Donovan who retired undefeated Middleweight Champion of the World, and for years was boxing instructor at the New York Athletic Club.

You practice before a mirror, starting with motions you are already familiar with, such as reaching your hand out for a coin, the breast-stroke in swimming, etc. From these familiar movements, you are subconsciously led into similar movements in boxing—striking heavy blows, ducking, feinting, guarding, in true professional style.

SHADOW BOXING. When you've mastered the fundamentals, you're taught all the good blows and guards—when to land them, and how to guard against your opponent's counter. And to prepare you for your first bout, we have cleverly combined these blows and guards into three lively rounds of Shadow Boxing as practiced by professionals in their training.

You can't measure the value of this great course by its price. Some students tell us that it's worth \$25. Norman Tompsett says, "I wouldn't sell mine for ten times what I paid for it, if I couldn't get another."

HISTORY OF BOXERS: The course includes a history of Boxers, including such famous fights as the Dempsey-Firpo, Firpo-Willard, Dempsey-Gibbons bouts, etc., with ring-side views.

10 Day Trial—Send No Money

Simply fill in and mail the coupon. When you have the course in your hands, deposit \$1.67, plus actual postage, with the postman. Study the course for 10 days. If, for any reason, you are not entirely satisfied, return the course and get your deposit back at once. Stillman Association, Dept. 1724-G, 247 Park Avenue, New York.

The Stillman Association
Dept. 1724-G, 247 Park Avenue, New York

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.

Name.....

Address.....

Canadian and foreign orders must be accompanied by cash (\$1.67 U. S. funds) subject to money back guarantee if not entirely satisfactory

**USE THIS COUPON
SEND NO MONEY.**



BOOK I: 32 illustrations. How to hit straight blows, swinging blows and corkscrew blows, guard, duck, feint, clinch and foot work. Mass boxing, for use in teaching large masses of men.

BOOK II: 35 illustrations. Every good blow used in the ring. The description of each blow is followed by the guard for that blow. Also fine points on feinting, ducking, clinching, breaking ground, judging distance and timing.

BOOK III: 36 illustrations. Shadow Boxing, combining such blows as the Benny Leonard Triple, the Fitzsimmons Shift, the Miske Twist, the Jack Dempsey Triple, etc. How to train with questions and answers.

BOOK IV: A history of 69 of the greatest fighters and boxers, 66 illustrations, including ring-side views.

BOOK V: Daily exercises. 30 illustrations. 6 sets of muscle-building exercises, the colon exercise for curing constipation and synthetic breathing, a remedy for weak lungs and nervousness.

BOOK VI: Jiu-Jitsu and Wrestling. 53 illustrations. Shows how to subdue an armed opponent, how to break a strangle hold, the Stecher Scissors Hold, Gotch Toe Hold, etc.

The Dinner Table

(Continued from page 65)

Put it in a warm place to rise until the dough has just about doubled its size. If your pans are the right size it will come just to the top of the pans. It will take from one and a half to two hours, according to the evenness of the temperature and the freshness of the yeast.

Bake the bread one hour. Have the oven hot (390 degrees Fahrenheit) for the first fifteen minutes, and then turn down the flame to medium or about 360 degrees. When done, turn out on a rack to cool before putting it away. The crust will be softer if you grease the loaves when you take them from the oven.

You will be much more certain of results if you use an oven thermometer. "Luke warm" means about 80 to 90 degrees and your mixture can be tested with an ordinary house thermometer. That is about the temperature the bread should be kept throughout the whole process of preparation, especially during the rising period. A draft of cold air is fatal.

I shouldn't advise anyone to try to make the bread without a bread mixer. You might succeed in doing it, but I don't think it would pay. The dough is very sticky and would give you a great deal of trouble.

You will also need three bread pans of the right shape, and they may be hard to find. You may have to send to some city hardware company for them. Or perhaps you can find a tinsmith that will make them for you. I found that a fat loaf like the usual baker's loaf didn't get done through very well. So I got long, narrow tins that measure $3\frac{3}{4}$ by 12 inches across the top and are 3 inches deep.

You will notice that the bread is put to rise only once. This reduces the time and labor tremendously. A little Holland-Dutch housewife told me what all Dutch women seem to know, and what all women ought to know. She said that bread can be mixed and put directly in the pans without any more fuss. She also said that you could use as many yeast cakes as there were to be loaves of bread—in this case three cakes to a baking—and the bread would rise very much quicker. She was right. I tried both short cuts and found I could set the bread after breakfast and have it done before lunch by this plan. What is more to the point, it is just as good as it was when I made it up and let it rise twice and used only one yeast cake and spent all day getting it done.

As to the matter of cost, I found that I saved money by baking my own bread in two ways. First, my own loaf actually cost less than baker's bread in spite of the fact that I had to pay more for whole wheat than for white flour. One of my loaves cost me about 18 cents. But it weighed almost twice as much as a 15-cent whole wheat loaf or a 12-cent white loaf, and when it came

to the amount consumed, my loaf went quite twice as far. But more than that, I found that the family actually consumed less of other food when they had my bread. It is so nourishing and generally all round satisfying that less of everything else is needed.

There is just one more warning that I want to sound. When you take your golden brown loaves from the oven, wondering and eager to see if the undertaking has been a success, you must abandon one old family tradition. You must forget all about your ambition to bake "light bread." What you have undertaken to make is *Whole Wheat Bread*, which is quite a different matter. It will actually weigh about two and a quarter pounds to the loaf. It will be dark brown in color, long and narrow in shape, and moist and flaky when cut. The inside of the loaf will be about the color of freckles. It is not fair to compare such a loaf with the regulation white or baker's loaf, or the "bread that Grandmother used to make." If you do that your bread will seem like a failure, and you will feel that all your trouble has been just a waste of time and good material. But if you measure it by its own standards of taste and usefulness, you have learned to know a good loaf of bread when you see one.

You will have found the real "Staff of Life."

DEAR MRS. RANDOLPH:

I have followed Mr. Alfred W. McCann's dietary advice for about three years, and the good health of my family demonstrates the truth of Mr. McCann's teachings. Your department is greatly needed these days when it is so hard to get the information you are giving your readers.

1. Knowing that some brown sugars are treated with sulphur, I presume that you mention dark brown sugar because it is pure. We seem to have some trouble trying to get it. Would you please mention a brand or where I may buy it?

2. I am unable to obtain any more of the Open Kettle Molasses from the local stores of Sheffield and Daniel Reeves. Can this syrup still be gotten?

W. H. T.

Brown sugar is much more tasty than white sugar because it has more of the original elements of the sugar cane juice in it. Jack Frost, Franklin, and Francis H. Legget's "Old-fashioned brown sugar" are all good. Any "number fourteen" sugar is either entirely free from the harmful sulphur treatment, or has so little that it is harmless.

Open kettle molasses is for sale in almost no grocery stores. Nobody sells it because nobody buys it, and nobody buys it because they don't know how good and how wholesome it is. Try writing to Mr. Louis Bohack, Natchitoches, Louisiana, or the Mississippi Farm Bureau Sugar Cane Growers, Jones County, Louisiana.

Waterbury, Conn.

DEAR MRS. RANDOLPH:

I would be very pleased if you would help me regarding food. I eat three meals a day, the first in my room (which I rent) consists usually of mixed nuts, and sometimes raisins, then I take my exercise. The second and third meals I get in any restaurant. What would you advise for these meals? I very seldom eat meat; in fact, eggs are what I usually get, but it becomes monotonous. I always drink milk from choice. This menu doesn't strike me as well balanced.—Yours sincerely,

W. R.

If you have to prepare everything in your room you could do no better than depend on fresh milk and a ready prepared breakfast food. Shredded wheat is one of the very few that contains all the wheat. Wheatstworth crackers is another. They are very good broken up in cold milk. There is a cereal which comes in cans called "Whole grain wheat" and made by the Whole Grain Wheat Company, 1905 Sunnyside Avenue, Chicago. It contains all of the wheat berry and has been scientifically cooked. It is good eaten either hot or cold, with milk or cream, or with nuts or raisins, or both. It also combines nicely with all the dried or fresh fruits.

If you have to depend on restaurants for the other two meals, then you ought to use a great deal of fresh fruit to offset the large proportion of protein and starches in the average restaurant meal. Oranges are perhaps the best of the fruits. The more of them you eat the better. Then order as many vegetables and vegetable soups as possible. You are right in using meat moderately. Don't eat too many eggs. Milk used in your room will best supply the needed proteins. And use whole wheat bread whenever you can possibly get it. If you can't get it, then cut down on white bread and use whole wheat crackers instead.

New Jersey.

DEAR MRS. RANDOLPH:

Is there any make of cracked wheat that I could mix with crumbled bran, raisins and chopped peanuts?

I am confined in an institution where I would have no access to a stove, neither would I be able to wash the wheat, but would have to mix the ingredients as I received them.

Any information you might give me concerning a whole wheat cereal that could be eaten raw would be greatly appreciated by

E. W.

Milk would be the best food you could use in your room. Combined with dried or fresh fruits, such as dates, figs, raisins, prunes, apricots, and oranges, and with green things like lettuce and cabbage, it is a protective diet of the first order. None of these things requires cooking. To this list you can add whole grain wheat, mentioned above, or Shredded Wheat Biscuits, both whole wheat products.

Are You One of the 95% Who Suffer from Sick Nerves ?

Millions of people are today only half alive and don't know it! They suffer from obscure ills, worry about imaginary troubles, find it hard to concentrate and easily fall a prey to disease that robs them of their vital powers—all as a result of continuous neglect of their nerves. Bernarr Macfadden, in a wonderful new book which you can obtain free, shows how to recharge your undernourished nerves and how to acquire glowing health and youthful vitality by following a few easy, natural rules. No medicines, drugs or self-denials, no exhausting exercises or disagreeable diets!

DO you worry and fuss over non-essentials? Do you get excited easily? Do you blush readily? Is your memory weak or your eyesight failing? Are your hands and feet cold? Are you troubled with constipation or other stomach troubles? Are you pale? Is your complexion blotched? Is your hair falling? Have you occasional headaches and dizzy spells? Are you troubled with insomnia and too many dreams? Are you impatient—emotional, quick to show your joy or sorrow?

These are only a few of the signs that show unhealthy nerves and if you neglect them you will slowly but surely head for the same disastrous condition that is now bringing misery to thousands of people.

Many a promising career and many a happy home has been ruined by some impulsive word or act. Many a social position has been irretrievably lost by some trifling indiscretion or error of judgment—due entirely to unstable nerves. To think that one marriage in every eleven ends in divorce! And to think that 95% of all the misery of the unhappily married is due to nothing more than irritated nerves. When a man loses his temper and flares up in excitement; when a woman begins to nag, fret and worry; when a child becomes unruly or shy—it's simply a case of nerve exhaustion.

It is a pity that so very few people really know how to keep their nerves sound and healthful. How much misery could be avoided, how much unhappiness could be changed to joy if the countless numbers of people who now overlook the little signs of nervous exhaustion could be made to see the folly of their neglect.

It is now just as easy to have sound, healthy nerves as it is to have clean, strong teeth and vigorous muscles! Without drugs or medicines—without tedious exhausting exercises or en-

forced hateful diets—without doing anything that isn't pleasant and delightful, you can now recharge your undernourished nerves and live a full, vibrant life that will help you to achieve a glorious business and social success.

Based on his many years of experience as a physical culture expert, Bernarr Macfadden has picked out and set down in writing certain simple, easy-to-follow rules that have helped thousands of men and women to regain their lost nervous energy and to acquire glowing health and youthful vitality. He calls his wonderful book "Strengthening Weak Nerves." You can obtain a copy without extra charge.

If you follow Bernarr Macfadden's advice faithfully, you will be overjoyed at the results. You'll look better and feel better than you have in years, you will have greater endurance, a keener appetite and a happier outlook on life than you ever had before. You will banish headaches, worries, constipation. Your complexion will become clearer, your eyesight stronger and you will gradually build up a vigorous body that will be able to resist nearly every ailment that is at present sapping the energy of thousands.

The book is written in an easy, fascinating style. There is nothing difficult to understand. You'll enjoy every page because it shows you the way to glowing health and vigor. The knowledge you'll gain from reading Bernarr Macfadden's book will help you throughout your entire life for it will build for you a solid foundation for your future success and happiness.

This Splendid Book Sent FREE With This Offer

The advice which Bernarr Macfadden has set down in his wonderful book, "Strengthening Weak Nerves," is invaluable to every man and woman. But if you act quickly you can now obtain a copy absolutely without extra charge. "Strengthening Weak Nerves" is sent free with a year's subscription to Physical Culture, the magazine that is showing thousands of people the way

to glorious health. Every month Physical Culture comes to you chock full of copious illustrations — powerful editorials — exercise articles—food articles — health articles — weight control — personal health problems—thrilling fiction throbbing with life—superb rotogravure section showing physically perfect men and women and beautifully developed babies—all glorifying a healthy mind in a healthy body.

If you're overweight you'll find articles on how to reduce; if you're too thin you learn how to put on many pounds of good solid muscle. If you're suffering from constipation, or a poor, sallow complexion, you'll find even in one single issue, wonderful authoritative advice that will bring you renewed vigor and a radiant complexion.

SPECIAL OFFER

Physical Culture is sold at the newsstands at 25c a copy. But for a limited time you can obtain a full six months' subscription—6 big issues—in addition to Bernarr Macfadden's book, "Strengthening Weak Nerves"—all for \$1.50.

If you want healthy nerves and vigorous body—if you want to add at least ten years to your life and enjoy ever minute of it—then mail the coupon below. The book, "Strengthening Weak Nerves," will be sent you at once with the first issue of Physical Culture. Mail the coupon now before this remarkable offer is withdrawn.

MACFADDEN PUBLICATIONS, INC.
Macfadden Building, Dept. S-7
1926 Broadway, New York.

I am enclosing \$1.50. Please enter my name for a special six months' subscription to Physical Culture. This entitles me to a free copy of Bernarr Macfadden's book, "Strengthening Weak Nerves."

Name.....

Address.....

A Few of the Symptoms of Sick Nerves

- 1 Excitement and mental depression
- 2 Headaches, dizziness, deafness
- 3 Weakness of memory
- 4 Disturbed sleep, troubled dreams
- 5 Blurring of sight
- 6 Ringing in the ears
- 7 Feeling of numbness
- 8 Cold hands or feet. Flushings and sweats
- 9 Muscular weakness, lack of endurance
- 10 Dyspepsia, other stomach troubles
- 11 Pains around heart
- 12 Spells of irritability
- 13 Knee jerks
- 14 Strange fears
- 15 Continuous flow of thought preventing sleep at night
- 16 Very emotional—quick to show joy or sorrow
- 17 Gloomy—pessimistic, always looking on the dark side of things.

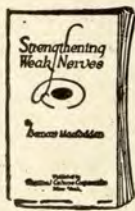
FREE WITH THIS OFFER AMAZING NEW BOOK "Strengthening Weak Nerves"

By BERNARR MACFADDEN

EVERY reader of Physical Culture can now obtain the wonderful book without extra charge. Here are some of its contents:

- What to eat and drink for nerve energy.
- Causes of fatigue.
- How to prevent loss of nerve force.
- How to restore nervous health.
- How internal and external bathing builds healthy nerves.
- How to breathe deeply.
- Exercises that stimulate weak nerves.
- The danger of drugs and nerve tonics.
- How to relax and grow strong.

Special spine treatment that soothes the nervous system.
Mental and emotional influences that build healthy nerves.
Ten simple rules for strengthening the nervous system.



in his wonderful book, "Strengthening Weak Nerves," is invaluable to every man and woman. But if you act quickly you can now obtain a copy absolutely without extra charge. "Strengthening Weak Nerves" is sent free with a year's subscription to Physical Culture, the magazine that is showing thousands of people the way

Your Back—the Keystone of Your Strength

(Continued from page 31)

several hundred pounds. When a truckman or porter wants to move or up-end a square case containing, say, 1,000 pounds of material, he does not stand close to it and push with bent arms and arched spine. He stands at arms' length, rests his hands against some part of the case, keeps his arms straight and his back flat, and does all the pushing with his legs, as in Figure 9. In that position he is able to employ the *full* strength of his back.

About the best exercise for strengthening the back and legs and for teaching them to work together is the one shown in Figures 12 and 13. It takes considerable practice to master it, but it is worth all the trouble, because it is one of the fundamentals of super-strength. You stand with the feet about 16 inches apart and strongly braced, and then take a kettle-bell and swing it backwards between the legs, as in Figure 12. As the kettle-bell goes backwards, you bend your legs *slightly* at the knees and lean the body forward from the hips, but you must *not* arch the spine. (In Figure 12 you will see that the back of the athlete is almost as flat as a board.) From this position, Figure 12, you swing the bell forward, and as you do so you bring the body to an upright position. This will make the kettle-bell swing at arms' length straight in front of you and at about the height of your chest, as in Figure 13. At that exact instant you must release the kettle-bell with the right hand, grasp it with the left, and swing it back again. After each swing you must change hands, and, as you bend over, you rest the free hand on the knee.

Start this exercise with a kettle-bell weighing 20 or 25 pounds, and learn to do the movement smoothly and easily. At first you will be inclined to fumble when you change hands. I have seen beginners try to slowly and painstakingly shift the bell from one hand to the other. The *right way* is to open the fingers of the lifting hand and let the bell start to fly away from you, and then grab it with the other hand before it has had time to travel even an inch forward. After a few days' practice you will get so that you can change the weight from one hand to the other at the top of the swing without the slightest interruption of the rhythm of the swinging movement. As soon as you have mastered the movement, commence to add weight to your kettle-bell. It will not be many weeks before you can use a 75 pound kettle-bell in this way, and not long after that before you can handle 100 pounds.

This exercise has so many beneficial effects that it should be included in the training of every one who aspires to super-strength. If you keep your back flat there is not the least danger of hurting yourself. Since your whole attention is concentrated on the swinging of the kettle-bell, it is impossible for you to see whether you are doing

it correctly, and so you should have a friend watch you and tell you whether you *are* keeping your back flat. Do not be so anxious to keep the back flat that you go to the other extreme and make the back hollow. The whole idea is to keep the spine as straight as possible and to do all the bending with the hips and knees.

Here are a few of the things you will gain from this exercise: You will learn instinctively to keep your back flat when making a great exertion; you will get a much firmer grip on the ground with your feet; you will learn how to "time" a heavy moving object; you will increase the gripping power of the hands and increase the development of the front part of the shoulder muscles; you will become able to jump further and higher. It is because "strong men" practice such exercises as these that they are able to make such remarkable records in the standing broad-jump and standing high-jump. I know a lifter, 40 years old and weighing 220 pounds, who can clear almost 11 feet in a standing broad-jump. At the age of 25, when he was lifting professionally, he could jump even further than that, and what is more, he could sprint 100 yards in 10 seconds flat. Incidentally, he holds one or two records in lifting heavy weights from the ground.

Some Lifting Records

When I first became interested in bar-bells I collected a lot of data about weight-lifting records. There was a time when I could tell you the world's record in almost any lift you could mention. I could tell the records for the best men in the different nations at the same lift. I knew the name of the man who made the record, when he made it, exactly how many pounds he lifted, and which other men had come closest to equaling his record. As I grow older I find that I care less and less about records and more and more about body-building. It seems to me to be much more important to help a man to get a finely proportioned body, great muscular and organic vigor, and a higher degree of development than to set him at record-making. Since my interests have changed my stock of information about records has grown less and less. As you go on you will undoubtedly notice that many a time I will tell you a record is "*about*" so and so, and that means that I am not sure whether any new records have been made abroad since 1914.

I could start and give you lifting records, some of which would be exact and some approximate, but unless you happen to be a skilled lifter such records would mean nothing to you. I am here going to tell you some of the records in back-and-leg lifting.

Possibly the most common test of strength in all the world is to bend the body over, take hold of a heavy weight,

and raise it from the ground. In weight-lifting circles this is known as the "dead-weight" lift or "hands-alone." It is exactly such a lift as a lot of powerful laborers or porters would naturally select if they wished to determine which was the strongest man among them. When a bar-bell is used the lift is performed as follows: The lifter first stands with his heels together and the handle of the bell over his insteps; then he leans over, by bending a little at the knees and a good deal at the hips, and grasps the bar-bell with both hands, as in Figure 14, the palm of one hand being forward and the knuckles of the other hand forward; then he straightens up (that is, stands erect), bringing the bar-bell up with him, as in Figure 15. Since the knees are bent only slightly, it is necessary to arch the spine and curve the back in order to reach down and get hold of the bar-bell handle. Therefore, it is not possible to lift very much weight in this way. The English amateur record is 533 pounds, but Mr. Jowett says that he has seen a 140 pound Canadian lifter raise 500 pounds, and that he saw a gigantic Canadian, Lavallee, perform the lift with 800 pounds. I have seen several men raise between 550 and 600 pounds in this way, but they did not stand with the heels together in the English style. I, personally, cannot see any reason for standing in that way. If the lifter were to stand with the feet about 8 inches apart he would be much more firmly braced, and could exert considerably more strength. This is a lift which any *unskilled* man can perform, and it is a fairly good test of the *natural* strength of the back. A big, 200 pound truck-driver, or one of the Herculean lumbermen from our western states, could probably do 400 pounds in this lift the first time he tried it, because his work has been just along this line, and the years he has spent in the daily handling of heavy logs and heavy cases of goods have developed the muscles used in the lift. On the other hand, a gymnast or a business man whose greatest physical exertion is practicing bending movements would probably be "stopped" with a 250 pound bar-bell. Therefore, if you are not used to heavy work or vigorous exercise, do not make the mistake of starting to practice the dead-weight lift with 300 to 350 pounds. That would be just as foolish as for a non-swimmer to jump off a ferryboat in mid-river. But if you practice the two back exercises already described, *then*, when you have gotten so that you can handle 100 pounds in *those* exercises, you will find you can outdo the average truck-driver or lumberman in dead-weight lifting.

At the noon hour one day several years ago I went into my factory and I found a number of lifters competing at the dead-weight lift. Some of the competitors were customers, and others

(Continued on page 78)

Thousands are learning to swim by this remarkable self teaching method. Why not you?

A complete thirty lesson course by the greatest swimming coach in America—for less than 10c a lesson.

If you ever had a doubt of your being able to swim banish it from your mind. No matter how timid you may be. No matter how skeptical you are of your ability to learn to swim. Even if you have tried to learn to swim before without success, this new and astonishingly easy method will quickly convince you that you can not only learn to swim without a teacher, without rubber wings, or help of any kind, but that you can learn at once—in one or two half-hour periods—with the whole summer ahead of you in which to become an expert.

THE UNIQUE METHOD OF A MASTER COACH

Mr. Louis deB. Handley, whose remarkable self-teaching system is taught in this thirty lesson course is the world-famous coach of the New York Athletic Club and New York Women's Swimming Association, the man who developed Miss Ethelda Bleibtrey, double Olympic Champion, Miss Aileen Riggin and Miss Helen Wainwright, world's record holders; and Miss Gertrude Ederle, greatest of all women swimmers, and a dozen other stars and world champions, to say nothing of having captained and coached the New York Athletic Club's water-polo sextette which held the national championship for more than ten years.

NEVER BEFORE WAS IT MADE SO EASY TO LEARN TO SWIM

Mr. Handley's remarkable method is self-teaching and so clearly explained, so lucidly written that you cannot possibly misunderstand the directions. Every feature of the stroke is illustrated and the directions are concise and easily remembered. And in the shortness of time it takes you to learn to swim this self-teaching method is absolutely unique. You learn to swim—really swim—in only one or two half-hour periods. That is because you are taught the complete stroke at one time and in such



a way that you can go immediately into the water and begin to swim. No need now to sit on the beach and watch others enjoying themselves, when in an hour or two you can learn to swim well enough to join them. But then you are only started. Just to swim is not enough. You are taught how to perfect your leg action, how to get drive and power into your arm stroke and how to time your movements into a single harmonious action that takes you through the water at lightning speed. Then you will know what it is to really swim.

THIRTY LESSONS MAKE THIS COURSE ABSOLUTELY COMPLETE

Don't think this course is limited to a single stroke. All the more popular strokes are here, the crawl, the back stroke, breast stroke and trudgeon, from three to six lessons on each. Then you are taught how to float, how to tread water, how to save life, when to swim, how to train for competition and much more that there is not space to tell you of here. Every line of these thirty lessons is packed with information of value to the expert as well as the beginner, a wonderful course such as only a master coach could write. Expect great things. You will not be disappointed.

AND SPEED—OH BOY!

Special mention must be made of the section devoted to speed swimming. No less than five lessons being devoted to this subject alone. If you are interested in working up your speed don't think of missing this opportunity. Here is every trick, every stunt, every new wrinkle for getting extra speed that has enabled Mr. Handley's pupils to shatter one world's record after another. Mr. Handley has developed more world and national swimming champions than any other coach in the history of swimming and if you follow his teachings and do



Harry Lewis, third in the National Championships, a new swimming star coached by Mr. Handley.



L. deB. HANDLEY
Swimming Coach New York A. C., New York Women's Swimming Assn. and Coach American Women's Olympic Swimming Team.

not increase your speed 50%, send back the course and your money will be returned to you.

OUR TEN-DAY TRIAL OFFER

We want you to see this course—to study this method by which thousands of others have learned to swim—to try it out and satisfy yourself that you too can quickly learn to swim—not just paddle around—but really swim. Then if you like, keep the thirty lessons and go on developing into an expert or you can return the course to us and your money will be immediately refunded.

Believing STRENGTH Magazine will appeal most strongly to readers interested in Mr. Handley's splendid swimming course we have included a six-months' subscription to STRENGTH Magazine in our offer. STRENGTH is pre-eminently the magazine for the physical culturist and health seeker. Every issue contains dozens of articles on exercise, sports, and the great out-doors for both men and women. Money cannot buy health but STRENGTH can and will show any man or woman how they can get health and keep it after they have it.

Take advantage of this wonderful opportunity and learn to swim for only a fraction of what personal instruction would cost. Think of it! thirty lessons by this world-famous coach for less than ten cents a lesson and six big 25c issues of STRENGTH, greatest of all health magazines, in the bargain.

SEND NO MONEY but make sure of getting your course by mailing your reservation at once as this offer may be discontinued without notice. So mail the coupon today.

THE MILO PUBLISHING CO.
2741 N. Palethorpe St., Phila., Pa.
Publishers of STRENGTH Magazine

THE MILO PUBLISHING CO. S. 7-24
2741 N. Palethorpe St., Philadelphia, Pa.

You may send me L. deB. Handley's complete course "Thirty Lessons in Swimming" and enter my subscription to STRENGTH Magazine for six months. Upon receipt of the course I will deposit \$2.85 (plus actual postage) with the postman in full payment for both the course and the magazine with the understanding that if at the end of 10 days I am not entirely satisfied I may return the course and have my money immediately refunded.
(Please write plainly)

Name.....

Address.....

City.....

Canadian (\$3.10) and foreign (\$3.35) orders must be accompanied by cash (U. S. funds) subject to money back guarantee if not entirely satisfied.

Your Back—the Keystone of Your Strength

(Continued from page 76)

were the men who made bar-bells, and every one of them was accustomed to handling heavy weights. I asked them why they didn't try the "hand-and-thigh" lift, and found to my surprise that they were unacquainted with that style; so, naturally, I demonstrated it to them and lifted two or three hundred pounds more than they had been using. That was not because I was very strong, but *because I was using a much easier style*. A week later, when I went into the factory, several of these same men made "hand-and-thigh" lifts with *three or four hundred pounds more than I had lifted*. It had taken them only one look to grasp the principle of the style, and they had put in a little quiet practice. This was so interesting to me that I immediately ordered the lifting platform shown in Figure 3. If you examine the picture you will notice that the weights to be lifted are placed on the lower platform, and that from the superstructure of this lower platform there is a rod which projects vertically upward through a hole in the upper platform. The upper end of this rod was threaded so that the lifting-handle could be screwed up or down, so as to suit the height of the lifter. In making a "hand-and-thigh" lift, the athlete would adjust his handle so that when he bent his knees the handle would come just to the top of the thighs, as shown in Figure 17. He would then take hold of the handle-bar, allowing his knuckles to rest against the thighs. When lifting the weight he would lean a trifle backwards and straighten the legs.

When making a lift like this, all one has to do is to get the weight clear of the ground; but sometimes the lifter is deceived, because he thinks he has raised the lower platform when he has only *tilted* it and raised one end of it from the ground. So we rigged up an electric connection at each end of the lower platform, and when the platform was lifted fairly and squarely for one-quarter of an inch a circuit was completed and a bell rang. If only one end of the platform were lifted, the bell did *not* ring.

In this lift the greater part of the work is done by the legs. When a very heavy weight was used the lifter's knuckles were forced into the flesh of his thigh, making it necessary to throw a pad across the upperlegs. By placing the hands on the thighs in this way, the force with which he could grip the bar was greatly increased. No one ever complained that he could feel the strain in the legs, although almost every one noticed that the effort of pulling with the hands produced a perceptibly dragging effect on the trapezius muscles which lift the shoulders. (Some of the men found that they could add 100 or 200 pounds to their record by leaning further back, thus supplementing the strength of the legs with the strength of the back-muscles.) I understand that the world's record in this lift is *about 1,850 pounds*. The men who used our platform were not back-lifters nor harness-lifters, but bar-bell lifters; consequently, after the first novelty had worn off, the platform was rarely used. Nevertheless, I saw some of these bar-bell lifters (men who weighed 160 to 175 pounds) raise over 1,200 pounds, and one or two of them went as high as 1,500 pounds. If they had taken the trouble to prepare themselves for the lift, by practicing special leg exercises, they might have gone as high as 1,600 pounds. Some of the giants like Cyr, Barre, and Travis could probably have gone close to the record, or even beaten it. My experience was that any *fair* bar-bell lifter could raise over 1,000 pounds within a day or two after he had mastered the principle of the lift.

Just below the bar-bell factory was the garage of a piano-moving concern, who employed a lot of big, husky workmen. Some one told these men about the lifting-platform, and one day a half a dozen of them came in to try this lift. There was not one among them who weighed less than 180 pounds, and some of them must have weighed 220. They were the typical broad-shouldered, wide-backed, thick-legged type whom you would *expect* to see carrying pianos up flights of stairs. Not one of

these men was able to lift 800 pounds in the hand-and-thigh style, and they never came back to try again, because one of our chaps, who weighed only 165 pounds, raised 1,250 pounds on that occasion. Nevertheless, I believe that almost any one of these visitors *could* have raised almost as much if he had practiced for a week or so, because the very nature of their daily work developed the muscles used in this lift.

A good exercise would be to raise a very heavy bell by a modification of the "hand-and-thigh" lift. Place a heavy bar-bell on the ground in front of you, tie the ends of two ropes around the handle, and the other ends around a bar of wood or iron. The ropes should be so short that in order to place the knuckles in the bend of the thighs (as in Figure 16), you have to bend the legs about as shown. Now, straighten the legs and raise the weight from the floor, and repeat several times. Do not be frightened if I tell you that it is perfectly safe to start this exercise with 200 pounds, and that after you have been practicing a few weeks you will be able to raise 500 or 600 pounds several times in succession. If you follow the rules given there is not the slightest danger of injuring yourself or of overstraining yourself. A man who has never seen a dumb-bell bigger than the pairs of 5-pounders which decorate the ordinary gym is apt to be startled if he is told to use 200 pounds. Of course, no one but a natural-born giant could use 200 pounds in *arm* exercises, but leg exercises are an entirely different matter, and it is not until after you have practiced the foregoing exercises that you will realize how it is that these professional "strong men" are able to lift, support, or carry weights which run up into the thousands of pounds. If you use bar-bells as they should be used, that is, as a means of getting a magnificent body and super-strength, there is no need for you ever to perform these vaudeville stunts, but just the same it is a nice thing for you to feel that you could do them if you wanted to.

Weston's Early Life

(Continued from page 35)

finding that he made lots of money and had a very good time in the pedestrian business, he continued to give "feats of endurance" to a wondering populace until it was too late to learn any art. But he never lost his Bohemian, artistic outlook on life. Never bothered his head about heaping up riches. "Gave to him that asked, and did not turn away from him who would borrow." I never knew him to refuse aid to any one who asked him for it. From the overcoat on his back to the last nickel in his pocket, he would give generously, without hope of return.

Naturally optimistic, he always expected things would come his way, in time. If the delay was longer than he expected he still looked on the bright side, and found stimulation where others would give up in blank despair. "I feel greatly encouraged!" was a byword in our family, for Dad said it so often when the Weston exchequer was at the lowest ebb.

He had a keen sense of humor, too, which always helped over the hard places. Mother said he was the only man she ever knew who could appre-

ciate a joke against himself. But he could, and laugh as heartily as anyone, with pure enjoyment of it.

Still, only an extraordinary man could walk over three thousand miles after his seventieth birthday, and then have the ambition at eighty-two to repeat his youthful feats of endurance. He kept his youth by taking good care of his body, not overexerting himself, and being temperate in all things. The contributing factors, with which he was born, were an optimistic disposition, an indomitable will, and a hardy, God-fearing ancestry.

You Wouldn't Wear Glasses

If You Knew What I Know



Condemned to wear glasses for the rest of my natural life.

When I joined the company three years ago I was a confirmed eye-invalid. I had what the oculists called Astigmatism and had worn glasses from the time I was fourteen years old. Glasses were as much a part of my wearing apparel as my shoes or my shirt. I put them on when I got up in the morning and never took them off until I went to bed at night.

Without them I was as helpless as a blind man.

The thought that I would ever be able to see perfectly again without glasses never entered my mind, not even in my dreams, for hadn't the leading oculists and optometrists advised me to the contrary, and didn't I have to go to them at stated intervals and have the lenses in my glasses changed to allow for the continual fluctuation in my range of vision?

Shortly after joining the Macfadden Company I learned that they published a course in eye training compiled by Bernarr Macfadden, the famous physical culturist, in collaboration with one of the world's leading eye specialists. But that didn't mean anything to me, for wasn't I a confirmed eye-invalid, condemned to wear glasses for the rest of my natural life? One day when I had been with the company about six months I happened to be in Mr. Macfadden's office on a matter of business. I was about to leave when he startled me by saying, "Jackson, why don't you take up the eye course and get rid of those glasses?" He might just as well have asked me, "Why don't you learn to live without food?" I wouldn't have considered the question any more ridiculous.

But he talked to me. He told me how he was in the same boat as myself when he was about forty, and how he had cured his eye troubles by just some simple eye exercises which he invented, and that how since he has published the exercises in course form with the aid of the eye specialist referred to, eye sufferers from all parts of the world had written him letters of gratitude for what the course had done for them—some of them much worse off than I was.

Well, to make a long story short, he finally persuaded me to try the exercises. I took the course home that night and read it through. And the next morning I began the exercises. That was more than two years and a half ago.

I haven't worn a pair of glasses for over a year—not even to read by. As I told you, I am in the correspondence depart-

EVERY time I see a man or a woman wearing glasses I always think: "If you only knew what I know, you would have those things off within three months' time, never to put them on again." I feel just like stopping them and telling them what I know about certain eye exercises that would, in an amazingly short time, put their eyes in such a condition they could forget that such a thing as eyeglasses ever existed.

But you know how skeptical people are as a rule and I know I wouldn't be believed, or thanked for my trouble. But, there is nothing to prevent my telling the readers of STRENGTH my story. They can believe it or not, just as they see fit.

But those who believe it enough to interest themselves to the extent of further investigation I know will thank me all the rest of their lives, and that is reward enough for the effort.

So here goes:—

My name is Jackson, Laurence B. Jackson. I am employed by the Macfadden Publications, Inc., publishers of magazines and books. I am in the correspondence department.

ment where I read poorly written letters for eight hours of the day and the strain on my eyes is tremendous. But my sight is perfect and my eyes trouble me not at all.

Wonderful? Yes! Are you surprised that I would like to tell my story to every person I meet? And it's not just *my* story. It's the story of nine people out of every ten who take up the Macfadden System of Eye Exercises and stick to it.

It can be *your* story if you're one who wears glasses or one who soon will have to.

In order to make it possible for any eye-invalid to examine his course without risking a penny, Mr. Macfadden sends it out on a five-day approval basis.

The price has purposely been made very low so as to be within the reach of any person—\$5.00 complete, postpaid.

There is a coupon on the right hand corner of this page for your convenience in sending for the course if you feel you would like to try it after reading about my experience.

Last October, at the special request of Mr. Macfadden, I attended the great Physical Culture Show at Madison Square Garden so that those present could see, not an extraordinary but a typical example of what his wonderful eye course will do for eye-invalids.

I talked with hundreds of persons and if you were there, it is possible that you have already met me and heard my story from my own lips.

I can't add anything to what I've said above. I've told you my story. It's in your hands, whether you will profit from it or not.



I have not worn glasses for over a year—my eyes have never been so strong nor my vision so good.

Send No Money Now

MACFADDEN PUBLICATIONS, INC.,
Dept. S-7, Macfadden Bldg., 1926 Broadway, N. Y. C.

Entirely at your risk you may send me your course of Eye Exercises. Upon receipt I will pay the postman \$5.00.

It is understood if after trying the course for five days, I decide not to keep it you will immediately refund my \$5.00 upon return of the course.

Name.....

Street.....

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

Macfadden Publications, Inc.

Dept. S-7, Macfadden Building
1926 Broadway, New York

Massage Will Put New Life Into Tired Bodies

(Continued from page 57)

violent massage, so rough that it hurts, is never beneficial; begin gently.

Generally the direction of rubbing, squeezing, etc., should be toward the heart, as this facilitates the flow of the venous (impure) blood. The veins are the muscles' drain-pipes, and our object is to throw all debris of worn-out tissue into this current and keep it moving vigorously. In mental ailments, be it simple headache or severe cerebral congestion, gentle stroking that draws the blood *away* from the head will always be found helpful.

Try to get the part being treated as relaxed as possible. In massaging a thigh, for instance, you can bend the knee, place the foot on your other leg, and take all tension from the muscles of the limb being worked. It is always advisable first to get the muscle mass into a position favoring softness and mobility before work is started; results will come quicker and be more satisfactory. Whether or not to use oil in massaging is of less importance than many believe. If the skin is especially dry, or when the manipulations have to be unusually prolonged, oil is advantageous. My preference is olive oil, though cocoanut oil and several other kinds, as well as powders, are employed.

Friction (rubbing) is the simplest form of massage, and the first step in the treatment of any part of the body. The whole or a part of the hand is moved over the surface—with considerable pressure on the large muscles, more lightly on the delicate parts. If you have ever watched a carpenter using a plane, with his long, sweeping movements, you have the general idea of friction as applied to the limbs. The hands themselves represent the plane, either one on top of the other, or side by side. The long movement can only be employed when rubbing the lower limbs, which are rubbed from below upward, from foot to thigh; but shorter movements of a similar character are used in other parts.

The most important of all massage movements is kneading. As we went to the carpenter to see rubbing, we may go to the baker to see kneading. In this movement the muscles are grasped in the hands and squeezed in a manner which varies with the part of the body on which you are engaged. Sometimes they are compressed merely between the fingers; at other times it is necessary to compress them against the bones.

Remember that those muscles easily seen on a tensed limb are only a part of the material we must handle. Grip the muscle masses *between the heel of your hand and your fingers* rather than between fingers and thumb. Use the fleshy part of your thumb, not its end. This method of using the hand, besides preventing any scratching of the skin, tends to make you work deeper, and it is the underlying structures we wish to get at. You can feel the

muscles just under the skin, and these must be made to glide over the still deeper muscles just above the bone. Of course it will take much practice to do this properly.

Don't merely squeeze the muscle. It should be *lifted* from the bone, or in case of the surface muscles, be pulled from the muscles beneath and stretched, always in an upward direction in working on limbs. There should also be a pull outward from the middle line of the limb, so that the partitions of membrane between the muscles are well stretched, and more freedom is given to each individual muscle. When the muscle is pulled up as hard as possible only then is it let go. Working in this way encourages in the highest degree the flow of blood through the part being treated. In kneading, both hands may be used together or one after the other, as preferred.

Rolling is a variation of kneading and is very effective. In this the hands alone or the hands and inside of forearms are used. When both hands are used at once they are placed opposite each other, that is, a hand on each side of the limb being massaged. The rolling action is, of course, across the muscles. Only by great pressure can you secure the full results from rolling.

Wringing is another variation of kneading. The limb is grasped with two hands placed close together, and they are then pushed apart with a wringing or twisting motion. You can vary this action by shoving the hands together in the same direction across the limb. Sufficient pressure must be used to prevent the hands slipping over the surface.

The third great division of massage movements is vibration—the first and second being friction and kneading. In deep vibration the palm of the hand is placed firmly upon the surface of the part to be worked, the arm is held straight, and a fine jarring or trembling movement is communicated to it by the action of the muscles of the upper arms. Shaking is a variation of vibration; the part to be worked is grasped between fingers and thumb, either with one hand or two, and a tugging action is performed, the muscle being gently pulled away from the bone. Percussion too—a tapping with the fingertips or the edge of the hand—is classed by some as a form of vibration.

I have spoken mostly of the limbs, but of course massage is just as beneficial to the upper body—more so, in fact, as the general effects are greater. But you cannot treat your own back—nor your chest and abdomen—as well as some one else can do it. Two persons can be of mutual benefit when it comes to body massage.

Make a few light strokes from the neck along the center of the back. Then rub the big triangular masses which start at the neck and run across part of the shoulder blades. Rub these from the top along the edge of the

shoulder blades to their juncture with the backbone. If you work with two hands at the same time, they should meet in the middle. Now in the region of the shoulder blades, which you can easily outline under the skin, there should be given great pressure, one hand being placed on the other, and the mass rubbed toward the center. Then place your hands on the ribs at the side, and bring them across to the spine, pressing hard all the time. If you cannot get enough pressure with one hand by itself, place one on top of the other, and a better result will be obtained. Finish up by separating middle and index fingers of the right hand and rubbing downward from the neck to the end of the spine.

Fay's instructions for kneading of the back are: Start from the neck and work down, squeezing the muscles on each side of the back, working only one side at a time. The thumbs should be nearest the spine, and so the operator will be standing on the opposite side to that on which he is working. Go over each portion of the back, squeezing the muscles thoroughly and neglecting none. After having done this, face the subject's side and place the thumbs upon the spine with the fingers reaching over on the far side, and grasp as large a lump of muscle as you can and pull it toward the spine. Do this from the neck down on both sides. Now finish up by crowding the fingers together on one side of the spine, pressing considerably and drawing the hand downward as before. This will strengthen the bones and ligaments of this important area, and drain the vessels of their waste. Repeat this movement on the other side. Standing at the subject's side, place the hands high up on the back, with the fingers extended and close together. Now roll the muscles over the bones with one arm or both, working with fairly long sweeps, using both the palm and the inside of forearm in a sawing sort of motion. Finish one side from the shoulder down before starting with the other.

Few amateurs massage the chest correctly, because they rub in only one direction. First rub from the shoulder to the middle line of the body, embracing both shoulders and the pectoral muscles. Below the pectoral muscles and above the abdominal cavity the stroking should be in the opposite direction—from middle toward the sides.

Abdominal massage requires special care, but should not be neglected; because it not only develops important muscles but greatly aids the functions of digestion and elimination and removes fat from its favorite lodging place. The general direction of rubbing should be downward and outward, but the most effective movement in cases of constipation is a circular motion up the right side, across, and downward on the left side, following the colon.

Steel Spring Muscle- Iron Strength- -YOURS

This new way of building strength and muscle is the most astonishing, the simplest and the most successful method I know!

One of the world's strongest living men divulges the method that enabled him to acquire strength. This new method now brings the real promise of health, strength and power to even scrawny weaklings. And the simplicity of it will amaze you!



Andrew Passanant himself one of the world's strongest men—prize winner in contests of physical culture—tells how he was astonished at Breitbart's method—and how it surpasses previous methods.

Never before has such news been released in the world of physical training! I have known of Breitbart for years. But I never before realized what a superb physical specimen he is. His feats of strength are astounding—unequaled! He drives nails through oak planks with his fists. He bends silver dollars between thumb and finger. He sustains more weight or lifts more than any living man. He bends steel bands around his arm like so much ribbon. And as a young man he was a puny weakling. For years Breitbart has kept his method secret. "Anyone who knows my method can do what I can," he says. But now he wants the world of men, hungry for strength, to know. He has made his fortune and he is satisfied. So now, gladly, he has divulged his secret—he makes known the simplest strength-building method ever devised. Yet it is the most positive, quickest and successful of all known systems.

What Is This New Method?

I have been a student of physical culture for years. I know the methods of every

physical culture expert of any prominence in the country. They are all much alike. But here is a different, better method. Here is a system of strength and muscle building unlike anything I have ever seen. It has enabled Breitbart to become a superman. It has put inches on my own muscle. It has built rugged strength and power into even slightly built fellows who never had an idea they could become "strong men." There is no one so puny or weak whom Breitbart cannot help.

Breitbart Offers You Strength!

Are you one of those puny, undersized, white-livered fellows who is satisfied to live a second-rate existence—or are you red-blooded and full of pep and vitality? Are you satisfied with scrawny, "baby" arms and legs—or do you want muscle, strength and power? If you have a man's heart in you, are you satisfied with your physique?

Then wake up, come to life and get what Breitbart offers you!

Breitbart's method is unique, because it builds strength and muscle too. What is the Breitbart secret that is now made known for the first time? Here at last is a method that not only gives you big, bulging arms, shoulders and legs—muscles you'll be proud of—but strength as well. There are many ways of developing the size of your arms, but they fail to give you real strength. But the Breitbart way gives you the rugged muscular power to lift, to bend, to break, to crush and it makes every fibre count. So that as your muscles grow big your strength grows in proportion.

Send for Breitbart's Book Just Off the Press!

A 64 page booklet showing startling feats of strength by Breitbart—the Superman of the Ages, unparalleled in the world's recent history. This book will give you a real thrill of inspiration—just to look at its wonderful illustrations—to read its thrilling descriptions—will give you the call to power. It shows his pupils—it describes his methods—published now for the first time. Breitbart asks you to send only a dime to cover the cost of mailing and publishing.

How Strong Are You?

FREE! Breitbart's Muscle Meter. If you send for Breitbart's book at once, he will send you free one of his famous muscle meters to test your muscular capacity. This device measures strength a new way. It is so simple you will wonder no one thought of it sooner—and yet it tells you whether you are as muscular as you should be. Write at once—they are free—while they last. Clip the coupon now—don't delay—the first step to power is decision. Act! Send the coupon—before you turn the page!

CLIP - MAIL



Dept.
S.

Siegmund
Breitbart,
Inc.

Gotham Bank Bldg.
New York City

I want to become muscular and powerful by your new, better method. Send me your new 64 page book. I enclose a dime to help pay for distribution. I also want your muscle meter which is free.

Name.....

Street.....

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

BREITBART INC.

1819 Broadway, New York City

Hello, Humidity!

(Continued from page 21)

half an hour. Then the chamber was fitted with a small fan, and it was found that the mice could live twice as long in the chamber. The conclusion drawn from these tests is that motion imparts to air a certain "life element," and that motionless air becomes "dead air."

Motionless air may be "dead air" even out-doors. This we observe in certain sections of the country where there is no wind for several days, causing the air to become extremely depressing. This explains also why air seems so invigorating immediately after a storm. Just what the life element in air is has not been discovered definitely, though several logical theories have been put forth in explanation thereof. Some scientists term the life element "Ozone," different, however, from the Ozone produced through electrical means.

Too high or too low Humidity, though of less direct danger to health than "dead" air, deficiency of Oxygen or excess Carbon Dioxide, nevertheless causes more illness, because the body is so much more frequently exposed to improper humidity. It is agreed among scientists who understand the relation of humidity to health, that the degree of moisture in the air best suited for the body should not be less than 50% and not over 75%. In summer, in very dry sections, the humidity may be as low as 25%, whereas, when it is foggy or raining, the humidity may be from 90 to 100%.

It is not the degree of outside humidity, however, that is so dangerous to health, as the humidity indoors, that is, in our living rooms, sleeping rooms and offices. The conditions here are almost unbelievable. As stated before, the humidity in a desert may be as low as 25%, yet the humidity in the aver-

age living room, heated by steam, hot water or any of the much used systems, is very often as low as 20%. That is, the air in the average room in winter is drier than the driest desert air, while the air outdoors at that time usually contains 75% or more of moisture. Subjecting the nerves of the skin and the delicate membranes of the nose and other parts of the respiratory passages to sudden variations of humidity ranging from 20 to 100%, is one of the main causes of colds, pneumonia, tuberculosis, catarrh and other respiratory diseases. Nature never intended that the body be subjected to such extreme conditions.

An hygrometer is an instrument for measuring humidity. It operates by a principle similar to the cooling of the body through evaporation of perspiration; therefore, it is important that this principle be thoroughly understood. There are various types of these instruments, but they usually consist of twin thermometers, one known as a "dry bulb" and the other, the "wet bulb." The dry bulb thermometer is of the usual type used for measuring temperature. The bulb containing quicksilver of the other thermometer, is surrounded by a piece of cotton or linen fabric, which is kept moist by absorbing water from a small reservoir into which the lower part of the cloth (wick) is immersed, the bulb not being immersed in the water. As explained before, when water evaporates, it expands and becomes cold. Because of the evaporation of the moisture in the wick surrounding the bulb of the wet thermometer, the temperature is lower than that indicated by the dry thermometer. The drier the air, the more rapid will be the evaporation, and in consequence, the greater will be the difference in the reading between the

two thermometers. The difference in the readings of the thermometers determines the amount of moisture in the air. See the accompanying Humidity Table.

The human body, in a way, is similar to the wet bulb thermometer. It is always moist through perspiration, and when air comes in contact with the skin, the temperature of the skin is lowered, that is, the skin becomes chilled through evaporation. The drier the air, the greater will be the chill, even though warm air be blown against the skin. Note in the table for the hygrometer readings, that if very dry air (20%) at a temperature of 70 degrees be blown against the wet bulb, the drop in temperature will be 20 degrees, thus making the actual temperature of the wet bulb 50 degrees. The human body is affected exactly the same way. This phenomenon is of the highest significance. It explains why we become chilled, even when the air is not cold.

I shall cite an incident that occurred at the United States Capitol some years ago, which exemplifies the danger of dry air.

Many of our large public buildings are equipped with humidifiers—special apparatus for moistening the air to the proper degree throughout the building. The United States Capitol is thus equipped, and it is intended that the humidity be kept above 50%. During the winter of 1913 and 1914 there was a mysterious chill in the hall of the House of Representatives. Many complaints were made about this chill and many illnesses resulted. The engineers forced the temperature up to 77 degrees, but still the chill remained. In the Senate Hall, on the other side of the building, there was perfect comfort, with a temperature of 68 degrees.

Directions for Determining Humidity

DEPRESSION OF WET-BULB THERMOMETER

Air temp.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
60	94	89	84	78	73	68	63	58	53	49	44	40	35	31	27	22	18	14	10	6
61	94	89	84	79	74	68	64	59	54	50	45	40	36	32	28	24	20	16	12	8
62	94	89	84	79	74	69	64	60	55	50	46	41	37	33	29	25	21	17	13	9
63	95	90	84	79	74	70	65	60	56	51	47	42	38	34	30	26	22	18	14	11
64	95	90	85	79	75	70	66	61	56	52	48	43	39	35	31	27	23	20	16	12
65	95	90	85	80	75	70	66	62	57	53	48	44	40	36	32	28	25	21	17	13
66	95	90	85	80	76	71	66	62	58	53	49	45	41	37	33	29	26	22	18	15
67	95	90	85	80	76	71	67	62	58	54	50	46	42	38	34	30	27	23	20	16
68	95	90	85	81	76	72	67	63	59	55	51	47	43	39	35	31	28	24	21	17
69	95	90	86	81	77	72	68	64	59	55	51	47	44	40	36	32	29	25	22	19
70	95	90	86	81	77	72	68	64	60	56	52	48	44	40	37	33	30	26	23	20
71	95	90	86	82	77	73	69	64	60	56	53	49	45	41	38	34	31	27	24	21
72	95	91	86	82	78	73	69	65	61	57	53	49	46	42	39	35	32	28	25	22
73	95	91	86	82	78	73	69	65	61	58	54	50	46	43	40	36	33	29	26	23
74	95	91	86	82	78	74	70	66	62	58	54	51	47	44	40	37	34	30	27	24
75	96	91	87	82	78	74	70	66	63	59	55	51	48	44	41	38	34	31	28	25
76	96	91	87	83	78	74	70	67	63	59	55	52	48	45	42	38	35	32	29	27
77	96	91	87	83	79	75	71	67	63	60	56	52	49	46	42	39	36	33	30	28
78	96	91	87	83	79	75	71	67	64	60	57	53	50	46	43	40	37	34	31	29
79	96	91	87	83	79	75	71	68	64	60	57	54	50	47	44	41	37	34	31	29
80	96	91	87	83	79	76	72	68	64	61	57	54	51	47	44	41	38	35	32	29

The first column of the table represents the reading of the dry bulb thermometer. The numbers at the top of the scale, from 1 to 20, represent the number of degrees the wet bulb is less than the dry bulb. Example: If the dry bulb thermometer indicates 70 degrees, and the wet bulb 58 degrees, the depression or drop in temperature is 12 degrees.

Entering the table at 70 in the left-hand column and following the line across to the number under the column with the number 12 at the top, we find the number 48, which represents the percentage of humidity. Similarly the humidity may be determined at any temperature from 60 to 80, a range great enough for all practical purposes.

NERVE EXHAUSTION

How Nerve Abuse Wrecks Health

by PAUL von BOECKMANN

Lecturer and Author of numerous books and treatises on Mental and Physical Energy, Respiration, Psychology and Nerve Culture

THERE is but one malady more terrible than Nerve Exhaustion, and that is its kin, Insanity. Only those who have passed through a siege of Nerve Exhaustion can understand the true meaning of this statement. It is HELL; no other word can express it. At first, the victim is afraid he will die, and as it grips him deeper he is afraid he will not die; so great is his mental torture. He becomes panic-stricken and irresolute. A sickening sensation of weakness and helplessness overcomes him. He becomes obsessed with the thought of self-destruction.

Nerve Exhaustion is brought about through nerve strain. There is no other cause. Men strain their nerves through mental concentration and business worries; often too, through excesses and vices. Women strain their nerves mainly through their emotions, especially those involved in their domestic affairs. Indeed, we are in the midst of nerve strain everywhere due to the minute life we are leading. And no man or woman is so strong as to be immune to this strain.

Nerve Exhaustion is not a malady that comes suddenly, yet its symptoms are unmistakable. It does not manifest itself, as many think, in twitching muscles and trembling hands. The majority of sufferers from nerves seem strong and healthy, and may have not a tremor in their body, yet inwardly their nerves are in a turmoil and are undermining the entire bodily organism.

The symptoms of Nerve Exhaustion vary according to individual characteristics, but the development is usually as follows: First Stage: lack of energy and endurance; that "tired feeling." Second Stage: Nervousness; restlessness; sleeplessness; irritability; decline in sex force; loss of hair; nervous indigestion; sour stomach; gas in bowels; constipation; irregular heart; poor memory; lack of mental endurance; dizziness; headache; backache; neuritis, rheumatism, and other pains. Third Stage: Serious mental disturbances; fear, undue worry; melancholia; dangerous organic disturbances; suicidal tendencies; and in extreme cases, insanity.

If only a few of the symptoms mentioned apply to you, especially those indicating mental turmoil, you may be sure that your nerves are at fault—that you have exhausted your Nerve Force.

Perhaps you have chased from doctor to doctor seeking relief for a mysterious "something the matter with you." Each doctor tells you that there is nothing the matter with you; that every organ is perfect. But you know there is something the matter. You feel it, and you act it. You are tired, dizzy, cannot sleep, cannot digest your food and you have pains here and there. You are told you are "run down," and need a rest. Your doctor may prescribe a drug—a nerve stimulant or sedative. Leave nerve tonics alone. It is like making a tired horse run by towing him behind an automobile.

And don't be deceived into believing that some magic system of physical exercise can restore the nerves. It may develop your muscle but it does so at the expense of the



PAUL VON BOECKMANN

Author of *Nerve Force* and scores of other books on Health, Psychology, Breathing, Hygiene and kindred subjects, many of which have been translated into foreign languages.

Prof. von Boeckmann is the scientist who explained the nature of the mysterious Psychophysical Force involved in the *Coulton-Abbott Feats*, a problem that had baffled the leading scientists of America and Europe for more than thirty years, and a full account of which was published in *Physical Culture Magazine* and many newspapers.

nerves, as thousands of athletes have learned through bitter experience.

The cure of weak and deranged nerves must have for its basis an understanding of how the nerves are affected by various abuses and strains. It demands an understanding of certain simple laws in mental and physical hygiene, mental control, relaxation, and how to develop immunity to the many strains of everyday life. Through the application of this knowledge, the most advanced case of Nerve Exhaustion can be corrected.

I have made a life study of the mental and physical characteristics of nervous people, having treated more cases of "Nerves" during the past 25 years than any other man in the world (over 100,000 cases).

The result of this vast experience is embodied in a 64-page book, entitled "Nerve Force," a book that is essentially intended to teach how to care for the nerves and how to apply simple methods for their restoration. It includes important information on the application of deep breathing as a remedial agent. The cost of the book is only 25 cents, coin or stamps. Address me—Paul von Boeckmann, Studio 461, 110 West 40th St., New York City.

This book will enable you to diagnose your troubles understandingly. The facts presented will prove a revelation to you and the advice will be of incalculable value whether you have had trouble with your nerves or not. Your nerves are the most precious possession you have. Through them you experience all that makes life worth living, for to be dull-nerved means to be dull-brained, insensible to the higher phases of life—love, moral courage, ambition, and temperament. The finer your brain is, the finer and more delicate is your nervous system, and the more imperative it is that you care for your nerves.

"Nerve Force" is not an advertisement of any treatment I may have to offer. This is proved by the fact that large corporations have bought and are buying this book from me by the hundreds and thousands for circulation among their employees—Efficiency. Physicians recommend the book to their patients—Health. Ministers recommend it from the pulpit—Nerve Control, Happiness. Never before has so great a mass of valuable information been presented in so few words. It will enable you to understand your Nerves, your Mind, your Emotions, and your Body. Over a million copies have been sold during the past fifteen years.

Finally a heating expert from New York was called and with the aid of a hygrometer he immediately found the cause of the trouble. Tests showed that the humidity was at times as low as 20%. In the Senate Chamber, it was nearly 40%. Upon examination it was found that the humidifier in the House of Representatives Hall was not working properly. After the necessary repairs were made, an immediate improvement was observed.

The conditions found at the Capitol at Washington, exist in nearly every home, and it is no wonder therefore that millions of people are seldom free from colds and the many diseases that arise therefrom. It is indeed a reflection upon modern civilization that not all of our buildings, especially the public buildings, are thoroughly humidified. Several years ago I wrote a book entitled "Thermo-Science" (Heat Science) in which I described the facts presented here. Very many readers of this book wrote to me and reported remarkable results through following my suggestions in regard to humidifying living rooms. In many cases people stated that they had rid themselves of colds for the first time in years, and many long standing cases of catarrh, asthma and bronchial trouble entirely disappeared.

It was variously estimated that a saving of from 20 to 25% in coal was possible by proper humidification. It was found that a home heated to 65 degrees with about 60% humidity was far more comfortable than when heated to 75 degrees, but with low humidity. Any heating expert knows that it requires at least 20% more coal to keep a house heated to 75 degrees, than it does to heat it to 65 degrees.

However, saving of coal is but one of the virtues of normal humidity. Just as excessively dry air dries the mucous membranes of the respiratory tracts, so it also dries everything in a home. Excessive dryness causes the doors to shrink, seams to open in floors, pictures to crack, pianos to be ruined, wall paper to crack and endless other damage. Some years ago I built a new home and the builder was told to give special attention to the woodwork. When he had finished he was very proud of the fine floors he had put down and the beautiful panels in the rooms. About three years later he came into my home and incidentally inquired how the work had "stood up?" Upon examining the woodwork he was astounded, for he did not find a single crack in the floors and not a panel had shrunk or cracked. He could not account for the condition of the woodwork, until I explained that I kept the house well humidified in winter, when the steam heat was turned on, thus preventing the wood shrinking.

(Editor's note.—Continuing this most important and interesting discussion of the air we live in, the author in a third article, to appear in an early number of this magazine, will tell you how people catch colds, how to protect themselves against so doing and other very vital truths.)

Do You "Look" Your Strength

(Continued from page 56)



Build up Your Bank Account

STRENGTH Magazine has a proposition for a few more live wires who believe in STRENGTH and want to capitalize their faith in its future.

Getting subscriptions to STRENGTH is not at all hard and it does pay very generously. You will be surprised when we tell you how few subscriptions you need to get to add from \$25.00 to \$150.00 monthly to your income.

Every reader of STRENGTH knows dozens of people who ought to read STRENGTH and don't. But who would if they knew the work STRENGTH is doing in showing its readers how to build better and stronger bodies.

No one is better fitted than you who know STRENGTH so well, to explain what STRENGTH stands for. And your friends, neighbors, and acquaintances will thank you for bringing it to their attention.

Why not make up your mind now to give this work a fair trial? No experience is necessary. We will tell you exactly what to do at the start. A little enthusiasm and perseverance will do the rest.

Nothing would please us better than to send you a good-sized bonus check every month. But it's all up to you. The coupon below will bring you all the details. Send it in to us today.

STRENGTH Magazine
2737 N. Palethorpe Street
Philadelphia, Pa.

7-24

Please tell me all about your Special Bonus Plan. This places me under no obligation.

Name.....

Street.....

Town.....State.....

effect of the pose, he clasps his hands together and pulls in a way that assists him in flexing the deltoid muscles on the point of his shoulder, not forgetting to flex the upper-arm muscles by mental control. Most athletes instinctively tilt the head backwards to raise the chest; but this particular man has such control of the muscles which raise the chest, that it is not necessary for him to hold the head in a stiff or awkward position. As an exercise, this pose gives you control of the deltoids and the muscles which lift the ribs.

Before showing his back poses, the athlete turns a little away from the audience, clasps his hands behind the hips, throws out his chest, and then flexes the triceps muscles on the back of the upper-arms, as in Fig. 7. There are many details to be learned about this position. First, it should be noted that the chest has been protruded, second, that the shoulders have been drawn backwards and the shoulder-blades pushed together. That is what produced the two vertical ridges of muscle on the upper back. By turning the palms of the hands upward, one is able to make the forearms look thicker than if the hands were hanging limp. The hands do not actually touch the hips, but are lifted just a trifle in a way that allows one to tense the triceps. The first few days you will be very much disappointed at your own appearance when you pose in this way; but if you are firmly determined to make those triceps muscles show, they will eventually make their appearance. All you have to do is to make them as hard as possible, and with each day's practice they will get a little bit bigger and you will be able to draw them up higher. After each attempt, you relax the muscles and those on the back of the arms seem to slide downward and will leave your arm looking perfectly smooth. The more practice you do, the bigger the triceps will become. You can repeat this "triceps control" stunt a couple of dozen times in the space of a minute.

After the athlete has finally turned his back to the audience, he holds his arms straight and moves them around in a way that makes ridges and rolls of muscle ripple across the whole back. This is only possible to a man who has gained complete control of the muscles which lift or depress the shoulders, which move the shoulder-blades together or apart, and which raise or lower the arms. Pose 8 happens to be one of the old original stretching exercises. I wager that you have done this motion many a time on those mornings when you get up feeling particularly sleepy. In fact, the association of ideas may be so strong that when you first try this pose, you will involuntarily yawn. When you do the pose as a stretching exercise, you reach up as far with the right hand and as low with the left hand as you possibly can. This makes your body bend to the left. When you reverse the

position of the arms, you will naturally bend to the right. If you keep all the muscles of the back hardened by mental control, you will actually feel the muscles rubbing against each other as you shift your position. This man has used a stretching position but after he spread his arms, he deliberately jammed his shoulder-blades together. This one will be very hard for you to see in a mirror; but if you will first put your arms in position and then spread the shoulder-blades apart by stretching up and down, and then jam them together, you will get an exercise that develops all the upper back muscles. You can make the movement even more severe by keeping the arm muscles flexed—that is, hardened—as in the picture. If you wanted to have your picture taken in this pose, remember that if you spread your hands as far apart as possible, only the arm muscles will show, but if you jam the shoulder-blades together and raise the shoulders a trifle, you can get the crater effect near the base of the neck and the deep hollow over the line of the spine.

Pose 9 is a very familiar one. You should be careful not to bend the arms all the way, but only so far that the forearms are at right angles with the upper-arms. This man has forgotten himself for a minute and has not bent his left arm quite enough. Therefore, his left upper-arm doesn't seem to be as thick as it should. After the arms are in that position and all their muscles hardened, you move the elbows slightly backwards, as that puts the upper-back in a position in which it is easy for you to tighten all its muscles. When doing this exercise, you keep the muscles raised and alternately contract and relax all the muscles on the back of the upper body. The only trouble is that in order to observe your own progress, you should have two mirrors. But you can get over that by standing with your back to the big mirror in the dresser and putting a small mirror in front of you at the level of your eyes. I knew one man who used to fasten one of those rear-view automobile mirrors to his clothes-tree, then adjusting it so he could see the reflection of his back in his dresser mirror.

The last pose in the series is when you clasp your hands above your head, and then by mental control spread the shoulder-blades so far apart that they seem almost to press through the skin. Perhaps the easiest way to learn it is to lift the arms straight up above the head and then shrug the shoulders upward, as this helps you to spread the shoulder-blades. The position in number 10 is more difficult, but well worth learning, because after you have mastered it you can harden your arm and deltoid muscles at the same time that you are controlling the appearance of your upper back. Nothing but continual practice will help you here. It may be three weeks before you can observe the slightest projection of the

shoulder-blades, and then there will come a day when all of a sudden, you can get the position at will, and then you can rest assured that you are pretty well advanced in the science of muscle control.

There are two or three dozen very well known poses, each and every one of which could be used as an exercise. As you see such poses you should try to imitate them, and if you care to, add them to your daily routine. If you get a chance to see a posing act, watch every movement of the man who is posing, and then when you return home, see if your memory is good enough to enable you to repeat every one of these positions in order.

This scheme for daily exercise seems to neglect the legs; but you can overcome that if you make a rule of keeping the knees slightly bent and flexing all of the leg muscles every time you do an arm or a body pose.

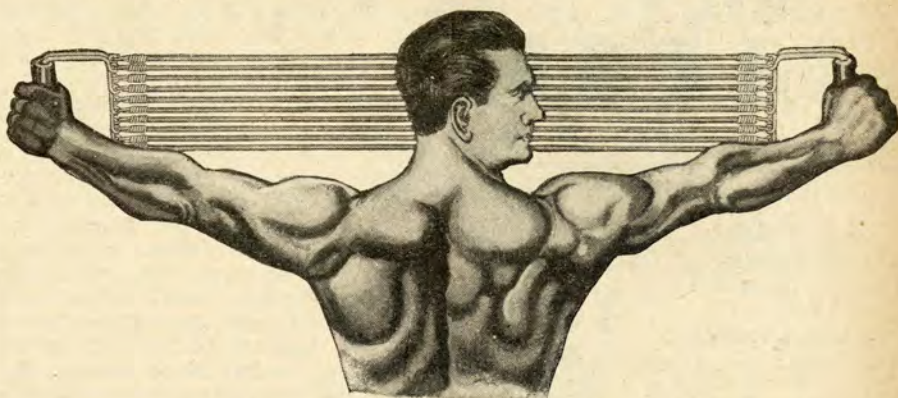
Six Best Exercises for Women

(Continued from page 39)

ber of repetitions for each exercise. That will depend upon your own strength and condition. A very few repetitions will be sufficient in the beginning if you have not been accustomed to physical training. As you become slightly hardened to the work, however, a practical plan is to give up one minute by the clock to each exercise. If you give up a little less than a minute you can allow yourself a few seconds to rest and get your breath. You can even plan to give a half minute to each exercise, getting them all over with in three minutes, but in this event you positively should do them both morning and evening. The important thing, however, to do them, instead of neglecting them. This half dozen will keep you vigorous and supple. They will keep your figure trim and firm and beautiful. And there is no way by which you can be beautiful except through the possession of a well developed body and good carriage. There is no such thing as "natural beauty" that is divorced from muscle tone. When your muscles are replaced by fatty tissue you become flabby and you lose your shapeliness. There can be argument about this. Imagine what would become of the beauty of a race-horse if he lost his strength and became grossly fat.

Miss Irene Wilson, who posed for the pictures illustrating this article, is an example of the athletic girl, brought up on sports and still devoted to golf and swimming. She has played a great deal of tennis and even baseball, all contributing to her development, flexibility and natural grace. Recently she has done a great deal of dancing, which has contributed to her bodily excellence, and during the past year she was among the attractions of the "Music Box Revue" Company.

How to Become a Marvel of Muscular Development



You Can Develop Enormous Muscles with This Newest and Greatest Invention in Physical Culture Apparatus

IF you want to be a *real* strong man, if you want to build up a powerful, muscular body that will make you stand out among men, you can do it simply by using the McFadden Patented 10 Cable Progressive Exerciser. This exerciser has a resistance of from 10 to 200 pounds. With the patented handles you have actually two 5 cable progressive exercisers which can be instantly converted into a 10 Cable Progressive Exerciser. The safety snap hooks can be quickly adjusted, giving you as many cables and as much or as little resistance as you may require.

Newly Patented Stirrup

This ingenious device is a new addition to the McFadden 10 Cable Progressive Exerciser and is provided to give you the proper exercise to build up the most powerful legs. It is made of one piece steel and will stand a resistance of from 50 to 1,000 pounds. It can be attached to any 10 cable progressive exerciser. The value of this marvelous invention cannot be estimated, as it will give you more exercise and better results than ever before.

Adjustable Patented Head-Gear Increases the Size of Your Neck One Inch in 30 to 90 Days

If you want to be strong and *look* strong, you must develop your neck. The McFadden Patented Head-Gear will positively increase the size of your neck **ONE FULL INCH** in from 30 to 90 days. This apparatus is simplicity itself and by following my 12 weeks home instruction course, which I give you free and complete with each outfit, you can accomplish most wonderful results.

The McFadden Patented Head-Gear is adjustable and will fit any man or boy. By using it in connection with my Progressive Exerciser there is no reason why you cannot become just as strong as you want to be.

What This Kind of Exercise Will Accomplish for You

When you exercise for muscular development you accomplish four things: You improve your health, your strength, your endurance and insure perfect blood circulation. With the outfits described above you can start at once on the road to

health and strength and develop your body to amazing proportions. Begin **NOW**, and even if you are the puniest man or boy, you can see yourself grow stronger day by day. You cannot fail, for I provide you with a

12 Weeks' Home Instruction Course FREE

Thousands of the world's greatest strong men have endorsed my home instruction course and the McFadden 10 Cable Progressive Exerciser. Remember, that I guarantee it to increase your upper arm biceps **ONE FULL INCH** in from 30 to 90 days, and all other portions of your body in proportion. Think what this means! In a few short weeks you are a new person—and you need not stop there, either. With the additional apparatus you get with this marvelous exerciser, you can develop your body just as much as you like, and even enter the ranks of the professional strong men, if you wish.

My guarantee is backed by a \$10,000 challenge

The introductory price of the whole outfit is only \$8, a very small cost for what it includes.

Here is what you get:

- 10 Cable Progressive Exerciser.
- Patented Progressive Handles with 1000 pounds resistance.
- Patented Progressive Stirrup with 1000 pounds resistance.
- Patented Progressive Head-Gear, the only one of its kind, progressive resistance and adjustable to any size head and neck.
- Complete 12 weeks home instruction course, the most wonderful ever written—the kind you cannot get elsewhere.

You get all of the above at the extremely low price of \$8. If you are not fully satisfied your money will be refunded without quibble or question. Send **NOW** for this great outfit. Delays do not make strength. Order **TODAY** before you misplace this advertisement.

MICHAEL McFADDEN Dept. 59, 103 E. 13th Street
New York City

ARE YOU CHANGING FROM A MAN INTO A "CLOTHESPIN"?



Look Yourself in the Mirror

Under-Weight
Under-Height
Sallow-Cheeked
and in
Rotten Condition

IS THIS
YOU?

SUMMER is here and bathing suits are in style—a man's figure is exposed to the stares of everyone. What will your friends think of YOURS? Every woman admires a well-developed body. "Skinnies" and "fatties" will be out of luck. But cheer up; YOU needn't be one of those they scorn and poke fun at! Through my instructions you can take off or put on weight wherever you desire. Muscles that are powerful—yet beautiful and symmetrical—will make you the AD-MIRED instead of pitied. You can be a PERFECT MAN—strong, healthy, athletic—with a development the whole world will envy. Get busy NOW—don't leave this training till the last moment.

BE A MAN—Not a Manikin

Quit wishing and wanting and waiting for Health, Strength and a Perfect Physique. Hook up with me and I'll carve out of your body a mighty, powerful, Herculean development with far more energy and strength than you ever dreamed possible. Thousands of others, just like you, are benefiting by my Course. In fact, many of my pupils are more perfectly developed than some of the physical instructors are. If you have any vigor and vim and vision lose no more time, but get started immediately and develop the Giant within you, so that YOU, too, can be a POWER among men and an inspiration to others.

"Secrets of Muscular Power and Beauty"



It's the greatest muscle-building book ever printed. Yes, and it's just chock full of large page photos of my pupils and myself. You'll be thrilled at the marvelous collection of strong muscular giants you'll see in this book. There's nothing else like it in the physical culture world. And it's printed in beautiful Colors, too. In addition to the scores of pictures, you are plainly told the secrets for developing Huge, Powerful, Rippling muscles on the outside and have inner Health and Energy on the inside. The edition is limited. I have only a few thousand copies left, so clip the coupon and send for Your copy Right Now.

FREE Everyone who writes me will have an opportunity of securing six large photographs of myself absolutely FREE. Also write at once for full particulars about the big cash prizes, expensive trophies and beautiful Diplomas I am giving away to pupils free this year.

CHARLES ATLAS
"The World's Most Perfect Man"

Winner of two \$1000.00 FIRST PRIZES and a DIPLOMA for Physical Perfection. No other living man can claim this title.

Charles Atlas

Dept. 444,

96 Fifth Ave.,
New York City

Mail This Opportunity
Coupon Now

-----MAIL THIS NOW!-----
CHARLES ATLAS, Dept. 444
96 Fifth Ave., New York City

Dear Sir:
Please send me your wonderful big colored book, "Secrets of Muscular Power and Beauty." I enclose a dime to help cover wrapping and mailing charges. This places me under no obligation.

Name.....
Address.....
City.....State.....

(Please write or print PLAINLY) ST

Girl Scouting—A Cure for "Flapping"

(Continued from page 27)

all by itself. One was in a grassy clearing, and there was an apple tree over the camp dining table that had been known to drop a red apple ker-bump just in time for dessert.

Willa's camp site, it appeared, was a mossy, grassy place in a grove of slim white birches. There was a waterfall near by. The music of tumbling water was in the air.

The child's mind was a jumble of new impressions. These girls who were to be the members of her family—would she like them? They were friendly and generous, but not at all like the members of the high school smart set in her home town. The camp required a regular uniform—bloomers and middy and flat-heeled shoes—so nobody could look really chic and unusual. It was a pity, Willa thought, for she had so many lovely sport clothes. What was the use of being stodgy?

Elizabeth Wells, a tall girl with daffodil-colored hair, answered Willa's question. She had been a scout three years, she said, and knew the ropes.

"You see, rich girls and poor girls alike come to scout camps. The rate is low because the scouts do all the work—as low as \$5 a week in some places, although \$10 is the average price. For this reason, lots of girls who would otherwise never get a sniff of the country have a chance to come. But it wouldn't do to have any girl made unhappy because her clothes weren't right. So the scouts have a standardized camp uniform. You'll like it fine. You can climb trees in it and jump fences."

At the thought of work Willa's suspicions were aroused.

"It'll be home all over again," she

thought. "Where there is work, there is bossing and nagging."

But no! Nobody bossed. Not a nag or a frown or a word of unwanted advice came from an oldster. There were plenty of adults at the camp—the camp director, for instance, the dietician, the nature study teacher, and the counselors; but they made it clear that the girls were running the camp. If you didn't know how to buck up wood for fuel, if you hadn't an idea how to cook a balanced meal, if you didn't see what had to be done to a camp lantern to make it burn cleanly and nicely, you could ask any grown-up who happened around. But they didn't seem to care whether the girls worked or not.

If the elders didn't make a fuss over neglected tasks, the laws of nature—including human nature—did.

On the first day of her arrival, Willa had rather scamped her part of the job of setting up her tent. The habit of neglecting work when possible was strong in her. A month later, there came a fearful night of wind and rain. Down came the tent ker-bump and hit her on the head. She got soaked to her skin, and her three companions who shared the tent likewise. No grown-up appeared to say: "I told you so." But the thunder and the lightning growled and raved more terrifyingly than the crossiest parent or teacher.

There was a night, too, when Willa and a red-haired scout companion were supposed to cook supper. It was Willa's job to shell the green peas, to wash the potatoes, and to husk the sweet corn. She loitered over a book.

"Don't you suppose you'd better get busy with those peas?" asked her com-



panion-cook. But Willa read on. Nothing else appeared to jog her conscience. Soon, however, an outdoor appetite, big as a walrus, came along and hit her in the solar plexus. She was wolfishly hungry and there would be no food to eat until she tackled the vegetables. Moreover in half an hour the rest of the patrol would appear, ravenous from a tramp in the woods and sniffing eagerly for the aroma of food. Mother's disapproval had been stimulating and exciting; but Willa couldn't bear so easily glum looks from her own companions.

When she slacked up on dishwashing, as she did in her mother's kitchen, she was sure to miss something—an impromptu work with the kindly nature study teacher, a boating party on the lake to see the sun go down, or a party at a neighboring encampment to entertain a scout from England or California or even far-off India.

Willa soon stopped rebelling against work—and not altogether because of the suffering that it brought. She got interested—eager to hold up her end, ambitious to make her encampment the best on the grounds. Her natural talent for leadership asserted itself.

There was a chance for a leader in the Girl Scouts. You could get elected leader of your patrol if you proved your worthiness. The patrol leaders together composed the Court of Honor, a congress of girls who were the real governing power of the camp. No adult could attend the Court of Honor without an invitation. It would be possible even to be a scout captain in a few years, and preside over a troop of scouts. You could study to be a camp counselor or a nature study teacher. There were no limits to the opportunity for influence and service.

To be a Girl Scout leader, though, you had to be an all-around outdoor girl. You had to be—well, not so much good as good for something. You couldn't get admiration and trust from

the scouts otherwise. No pink complexion bought from a drug store would go, nor flabby, useless muscles, nor lady-like incompetence. Being a crack swimmer—that would make them take notice! Getting a merit badge for basketball, too. Being able to tramp and climb mountains without tiring, to build good fires, to cook excellent open air meals, and to be, all the time, jolly, cheerful, and humorous—this would tell in your favor.

Willa hadn't been in camp two weeks before her chance came. Elizabeth Wells, who had been elected patrol leader, sought her out.

"I want you to be my assistant," she said, "I'm eager—so are all of us—to make the White Birch encampment the best on the grounds. We'll make a fine record at athletics. I'm not a bad swimming teacher and basketball coach myself. But I'm no good as a hostess and I hear you are. I'm told you are fine at getting up hay rides, and doing charades and plays."

"I can do such things easily," replied Willa, "and I'd love to help."

"Suppose we make an agreement," said Elizabeth. "I'll give you special help with swimming, boating, and athletics. And you help me run the social life of the patrol. We're supposed to give an entertainment two weeks from tonight at the open-air theater. Would you take charge?"

Taking charge was Willa's long suit. The play came off in the theater, with the sky for a back-drop, a gray rock for a stage, and a row of camp lanterns for footlights. The whole camp, a hundred and fifty people in all, came and applauded.

Willa felt important and useful—grown up. Her hunger for dignity and responsibility was satisfied. It was the beginning of a new stage of development. She dramatized herself thereafter as Willa the athletic girl and all-around good scout—not as Willa the obstreperous and scandalous flapper.

WHY Do Track Athletes Break Down?

(Continued from page 20)

national animosities whether they be over games and sports or affairs which seem much more important. We ourselves in this country are thoroughly familiar with this phase of the matter, for we have seen colleges and universities alienated from one another through happenings on the athletic field or a disagreement as to eligibility, far more often than through any other means. Hence this should be a lesson to us that the human animal is about the

same the world over, and anything that provides the fuel for a quarrel is extremely dangerous, especially in this upset condition of world politics. We have had practically none of these international quarrels in the other sports if we except the Dunraven incident, which was a case of petty individualism. Why then does it all center and come to a head in the Olympics? Ought we not to carefully examine ourselves in this matter?

Have You Hay Fever?

The haying season is here and the hay fever season is coming. Are you one of the many victims of this annoying, sneezing, burning and altogether exasperating complaint? What can be done about it? See the illuminating article on the subject in STRENGTH next month.

Learn to Swim In One Week!

NO longer need you fear the water or when in it just paddle aimlessly around. The new remarkably easy Bruce Swimming Method will instill confidence in the most nervous male or female, young or old, in practically no time. Once you gain confidence in yourself you will be amazed at your rapid progress.

EQUIVALENT TO PERSONAL INSTRUCTION

The Bruce Swimming Method has been so arranged that it seems as tho you have your instructor right with you at all times. You will never have any reason for doubt because each lesson has been scientifically laid out so that the answer is right before you on every question that might enter your mind. You will be thrilled at the ease with which you grasp each message and how rapidly you will progress toward becoming an expert swimmer.

The Bruce Swimming Method was written entirely by Dante Bruce, Society's Palm Beach Instructor, and originator of teaching swimming by mail. This is the third successful season for this course—it has proven itself. We know of no other similar course with such a record.

Only 8c a Lesson

Each lesson is a marvel of simplicity and completeness. You are rapidly carried from the most elementary stroke at the beginning to the crawl and diving at the end. There are 25 lessons in all and each one is so amazingly clear and simple that even the youngest child can understand and learn. Every move is fully explained and illustrated. Your enthusiasm over the course and at your rapid progress will carry you thru the complete 25 lessons without any of the apparent effort that usually accompanies the learning of some new accomplishment. Just think!—25 lessons at only 8c each—\$2.00 for the complete course and we guarantee your

MONEY BACK IF COURSE IS NOT SATISFACTORY

You are really securing the full course on approval. You try it at our risk. If you don't feel that it is all that we claim it to be—and we say you can

BECOME AN EXPERT IN A MONTH

send it back within 5 days after receipt and we will be more than glad to refund your remittance.

Get in the Swim!

No longer is there any need for you to just hang around the beach or envy the fellows who make a hit in the water by being able to swim like fish. Our method instills you with the confidence and the ability to do anything that anyone else does. You will amaze your friends and enjoy and benefit yourself by the ease with which you will propel yourself thru the water and the many stunts you will be able to perform. There is nothing that can compare with swimming for either pleasure or benefit—no longer need you swelter in the sun or no longer need you be ashamed of your physique because swimming brings every muscle in the body into play and you will quickly develop a physique that will be a source of pride to you. There is nothing to hold you back because the price of the course is within the reach of everyone—only \$2.00.



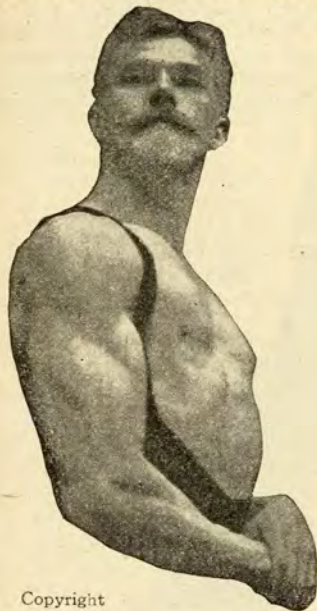
DANTE BRUCE

YOU!

should get this course at once. You'll never regret it; rather you will be another enthusiastic booster. Send that \$2.00 AT ONCE and make this summer one that you will really and truly enjoy.

BRUCE SWIMMING METHOD
Suite H-339
30 Church Street, New York City

Strength Is Your Life Spark



Copyright

Double Your Strength Improve Your Health

You have no idea of the **Strength—the Power—the Endurance and Dynamic Force** there is in the human body when the mind and will have gained the full mastery over the body. I can teach you how to attain this mastery over your own body.

My course is radically different from any other known method; an automatic device of my own design is included with it, which enables you to develop every part of your body to its full strength capacity **without tedious exercise movements.**

Compare your strength now in comparison with your own body weight.

The strength of your legs should be from 8 to 12 times your own body weight—the combined strength of your arms and Torso (Shoulders, Chest, Abdomen and back) should be equal to from 3 to 5 times the weight of your body.

Remember—You cannot accomplish much by pulling on spring or rubber cables—practicing all kinds of tiresome movements—no matter who is teaching you how to do them. You may succeed in puffing up your muscles to look bigger—but when the test for real strength comes—you discover **that you are not there.** The quality is not there. Training with progressive weight resistance—small weights for the small muscles and bigger weights for the larger muscles produce positive Strength. Results that count.

My Automatic Strength Developer changes the weights for you gradually—increasing them—big or small as you want them for making tests or for strength exercises.

By actual tests in pounds—you can **double your Strength in two months.** You do not depend on imagination—my machine measures the strength of your arms and shoulder, back and legs—even the fingers and the wrist. You could not accomplish in years what you can easily do with my machine in a few months.

Bernarr Macfadden

the eminent physical culturist, lecturer and author on health and strength, uses my machine and considers it a masterpiece.

My files are full of letters like this:

"After four months on the Automatic Exerciser I have more than doubled my muscular strength and the strength of my legs has nearly reached the capacity of the machine. I have never seen its equal as a muscle developer and strength builder."—N. Bitterlek, of Scotia, Calif.

If you want to know how to build yourself up and develop real lasting strength—Strength which means Robust Health—which vitalizes every inch of your body—the Strength which produces a sense of ease, comfort and power—a feeling that all the money in the world cannot buy for you, send for my illustrated booklet.

LIFE'S BACKBONE

PROF. ADRIAN P. SCHMIDT,
Suite 304-B, 1947 Broadway, New York.

I enclose herewith 4 cents postage. Kindly send me your booklet, **LIFE'S BACKBONE.**

Print or write your name and address plainly below.

.....
.....
.....

"On Your Marks—Get Set—"

(Continued from page 45)

my opponent's hand was out, too. Then I felt the touch of my team-mate's hand upon the stick, and saw that it was a fraction of a second before the Stanford take-off. And I was through. I was happy. Nothing else mattered. So I dropped where I was. Why go farther? I could not if I had willed—unless, perhaps, there had been another take-off to make!

And we won that relay. The taste of that victory is sweeter by far than the remembrance of the rest of the season, of the French College meet, with the fourteen nations competing, and the International Collegiate title of the world at stake; dearer, much, than the metric records for 75 and 150 meters, and tie records in the 100 and 200 meters which came in that Paris Championship a few weeks later. For I will remember the touch of that baton long after the recollection of the Amateur Athletic Union fight, in regard to my collegiate competition, has faded from my memory. Why? Well, because there was, after all, the satisfaction of the veteran who found that he still could maintain the traditions of the Twelve, and the romance of remembrance that the Knights of the Cinderpath could still uphold their own!

CONCLUSION

Allow me to close this story of the runners of my time by asking that old, old question of the sport world, "Can a man come back?" Few champions ever stop when they are at the pinnacle of their fame. Indeed, as I remember contemporary track stars, I cannot think of one who voluntarily gave up his laurels. He was either beaten or hurt or forced to turn professional.

When I was re-instated by the Amateur Athletic Union during the early months of 1924, and stopped a lecture tour to prepare for the Olympic Games in Paris, it was stated that I had been out of big competition for a long time, and had been inactive in running to the extent that I would have to "come back." But this was not the case. For I still retained my speed and my strength and found myself in the best of physical condition. I did not have to "come back" because I had not "gone."

There was some question as to the strength of my left ankle which I had injured, late in the fall, in a basketball game. But this ankle responded very well indeed to exercise and treatment. And after six weeks of intensive training I went from Pasadena to Des Moines, Iowa, to compete in the Western Classic Relay Games of Drake University. I was scheduled to run a special hundred yards handicap against Iowa sprinters, and a handicap 125 yards.

The weather preceding the meet was very hot, and then on Friday, April 24th, the first day of the meet, it turned cold, with rather a heavy rainfall. The

track became slightly soggy, and the 100 yards that day was run in the rain. I was away to a fast start, so fast in fact that after the race the starter decided that I had "beaten the gun." The time was 9 3-5 seconds, and convinced me that I was in form. The following day the weather remained at the same chilly temperature, with rain still falling. I attempted a 125 yards, giving my opponents a four yard handicap. From the 75 yards mark to the finish I do not ever remember running so fast, and the time was 12 seconds, a new mark for that distance. This race convinced me that the long-awaited chance to run 9 2-5 seconds for the hundred had arrived. So I agreed to try for the record. While waiting for this special event to be run off I was exposed to a draft in the training quarters, and was called to my marks before I had thoroughly warmed up. I started from my holes, pounding terrifically, and pulled so hard with my right leg that suddenly the muscle which I had first injured in 1921 gave way. I was still behind the men who had the four yard handicaps when it happened, and I was placed in an awkward position. If I stopped it would appear that I could not have caught the runners, and if I went on I was liable to injure the muscle seriously. So I pursued a middle course and managed to run just fast enough to nose out my opponents at the tape.

When I ran this race there was a man standing behind me in my lane at the start, whose advice and fellowship had spurred me on to make the attempt. It was one of those brothers of the cinderpath, one of my knights of the table round, who had passed on from active competition years before, Karl Hass of Grinnell.

The injured leg did not heal very rapidly. It held well enough at an eleven second pace for the hundred, but harder pulling split the sheath. I ran the following Saturday in 10 1-10 seconds in the Washington Relays against Vic Hurley, champion of the Northwest. Force of circumstances made it almost imperative that I run in these games in Seattle, Washington. But the running set the leg back considerably. Since that time I have nursed it along, favored it, and hoped that it would stand up under the Southern California Tryouts, the Far Eastern Tryouts and the Olympic Games.

If it will only hold up through these races, I feel now and I say that I will be satisfied to throw my spikes in the Seine after those Parisian Games and leave the Table Round, where the seats are already for the most part occupied by a new generation of sprinters. But even as I write this there is a question being asked way down deep within me, "Won't you also try, in the future, to 'come back'?"

THE END.

Constipation? That's Obsolete

(Continued from page 52)

I met him some months later, and again he looked hollow-eyed and glum, and I asked him what was the matter. "Same old trouble."

I looked him over with a stern eye. He fidgetted and looked the other way.

"You have not been following instructions," said I. "You've gone back to white bread."

"Well," he stammered.

"How long since you have eaten any whole wheat bread?"

"Well," he said, "it gets stale before I finish a whole loaf."

"How long since you have eaten any whole wheat bread?"

"Well," he stammered again.

"You buy a fresh loaf of whole wheat bread every day even if you throw away a part of it. You go back to whole wheat bread, fruit, combination salads, vegetables, as per schedule, and see what happens."

He grinned. "I guess you're right."

Now that, among other things, is the trouble with people who complain. Some of them know what to do and what to eat, but they are simply too easy-going to follow the regimen that they know will keep them fit. Again and again I have seen people eating white bread who know better than to do so, and who for reasons which form the subject matter of this story cannot afford to do so. There is no satisfac-

tion in saying that they deserve to suffer, and yet there is nothing any one else can do for such a person. He must work out his own salvation. We can tell him what to do, and we are here telling him what to do, but unless he has the force of mind actually to do it, to eat the kinds of foods and to secure the physical activity that will set him right and keep him right, the case is hopeless. As we have said, physical activity alone will solve the problem in some cases, and food alone will solve the problem in some cases, but the combination of activity and right eating will always work out.

There some other factors worthy of consideration. Chief of these is the practice of drinking water. It is not necessary to force down great quantities of water, but one requires a certain amount. It may be six glasses a day; it may be ten. The most effective plan is to drink two to four glasses of water before taking your four-mile walk. Drink your water and take your walk, and probably that is all that you will need.

Laxatives and cathartics, if ever used, should be regarded as emergency measures in case of illness or some desperate circumstance. The trouble is that when used regularly they tend to defeat their own purpose. They operate by extracting water from the

walls of the digestive canal, and by way of reaction, leaving the situation worse than before. The more you use pills or laxative syrups or castor oil, the more stubborn becomes the complaint and the more persistently you will find the need for using them. In short, the habit grows with what it feeds on. If, however, one wishes immediate relief, a practical measure is to use the mineral oil which is now much recommended and sold everywhere under various trademark names. Purified mineral oil is not digested or assimilated. It is non-irritating; it is purely lubricating in its nature as well as protective in cases of intestinal inflammation, for which reason it is sometimes recommended in diarrhoea as well as in constipation. And it is tasteless and therefore unobjectionable to take. In other words, it is a practical measure for stubborn or chronic cases.

The enema, or flushing treatment, is likewise a practical measure in stubborn or chronic cases and of most value in emergencies. Probably long-standing cases require considerable irrigation or flushing. But if one adopts rigidly the corrective diet as briefly outlined above, he can usually depend upon it to accomplish very desirable results, and especially so if it is combined with water drinking and sufficient active exercise.



Tobacco Habit Banished Let Us Help You

No craving for tobacco in any form after you begin taking Tobacco Redeemer. Don't try to quit the tobacco habit unaided. It's often a losing fight against heavy odds and may mean a serious

shock to the nervous system. Let us help the tobacco habit to quit YOU. It will quit you, if you will just take Tobacco Redeemer according to directions. It is marvelously quick, thoroughly reliable.

Tobacco Redeemer Not a Substitute

Tobacco Redeemer contains no habit-forming drugs of any kind. It is in no sense a substitute for tobacco. After finishing the treatment you have absolutely no desire to use tobacco again or to continue the use of the remedy.

long you have been using tobacco, how much you use or in what form you use it—whether you smoke cigars, cigarettes, pipe, chew plug or fine cut or use snuff, Tobacco Redeemer will positively remove all craving for tobacco in any form in a very few days. This we absolutely guarantee in every case or money refunded.

It makes not a particle of difference how

Mail Coupon today for our free booklet showing the deadly effect of tobacco upon the human system and positive proof that Tobacco Redeemer will quickly free you of the habit.

NEWELL PHARMACAL COMPANY
Dept. 974, St. Louis, Mo.

Free Book Coupon

NEWELL PHARMACAL CO.
Dept. 974 St. Louis, Mo.

Please send, without obligating me in any way, your free booklet regarding the tobacco habit and proof that Tobacco Redeemer will positively free me from the tobacco habit or my money will be refunded.

Name

Street and No.

Town..... State.....

Catarrh, Etc.

Your blood, containing fruit acid, is the only substance that can dissolve any mucus or "paste" in your system.

Mucus-Making Foods

In its passage through the body mucus is secreted in various organs, causing disease. The effects or symptoms are then named variously according to location, but the source of the trouble is the same—fermentation, chiefly from butter, cheese, cream, fat, oil, salt, etc., when used beyond your capacity, or in wrong combinations.

100 Names for 1 Disease

Mucus causes catarrh of the eyes (conjunctivitis), of the nose (rhinitis), of the ears (otitis, deafness), of the bronchial tubes (bronchitis, asthma), of the lungs (tuberculosis), of the stomach (gastritis), of the appendix (appendicitis), of the bowels (colitis), etc.

Correct Eating Cures



Pure juice from grapefruits, without sugar, and pure tomato juice, berries, etc., when used as freely as water and combined with adequate quantities of the brain-and-nerve nourishing foods with stimulative and laxative vegetables, can prepare your blood for dissolving mucus.

Fresh fruit acids clean a stomach that is suffering from mucus or acidity. Hyperacidity, acidosis, is produced by mucus from fermenting foods, just as vinegar is made from fermenting sugar, syrups and fruits. But fresh fruit acid when correctly combined is always beneficial.

Objectable features of catarrh are expectation, "hawking," "running nose." In a singer or speaker, a career, a life work, is ruined by a little flocculent matter on the vocal cords producing hoarseness, forfeited engagements, missed opportunities, etc. Deafness hinders advancement in business. Noises in the head make the sufferer irritable, and irrational.

Tubercular Catarrh

A deposit of mucus in the lungs is often suppressed by medicine made from coal tar derivatives. The cough is sometimes quieted, but the mucus remains to form the seat of tuberculosis.

Why Envy the Live-Wire?

Mucus when present in large quantities prevents the nerves from assimilating their due nutriment. It is a cause of undue fatigue.

Stop using mucus-making foods and learn to take brain-and-nerve foods, etc. Build yourself into a go-getter, a live-wire, an untiring person, internally clean, who turns work into pleasure.

One pupil wrote: "No mucus, voice stronger, head clear as a bell, gained 20 pounds, and now earn four times as much."

Educational booklet 10 Cents. Sworn statements. Over 6,000 pupils.

BRINKLER SCHOOL OF EATING

Dept. 20F, 131 West 72nd St., New York

You Can Have



STRONG SHAPELY LEGS

Are your legs skinny, too fat, or weak, and are you troubled with sciatica, rheumatic pains in the legs? Do you get tired when you walk upstairs? Do your legs get a cramp or become numb at times? The instructions in my book, "Strong Shapely Legs," will give you a strong pair of legs. Thick ankles, weak ankles, flat feet and other bad physical defects in the legs will be improved. The results are quick and permanent.

Every man and woman can have strong shapely legs.

Price 25c in coin postpaid.

PROF. A. BARKER, D. C.

Dept. 134.

865 Sixth Ave., New York City



PIMPLY SKIN made WELL

When a few applications of this wonder-working lotion has cleared faces of pimples, blackheads,

acne eruptions on the face or body, barber's itch, eczema, enlarged pores, oily or shiny skin, you can realize why CLEAR-TONE has been tested and approved in over 100,000 Test Cases. The simplicity of the treatment, and *The Story of How I Cured Myself* are all explained in my free booklet, "A Clear-Tone Skin." Write for your copy today and learn of the results gotten by thousands of men and women.



E. S. GIVENS, 206 Chemical Bldg., Kansas City, Mo.

"Life Feels Like a Fight"

(Continued from page 63)

comfortable and as happy as a youth can be who has been suddenly stricken and put into a wheeled chair instead of being on his feet and at work.

"You sure treated the boys fine, Mr. Gantry," Spud said. "We're all for you and Miss Clyde, and the first thing I do when I get out of this here jail is to go up and bust a mill-hand in the snoot. That's how I feel!"

Gantry laughed.

"I may break into the milling game myself, Spud," he said. "So you'd better handle them easy—I might need the very one you busted."

"Oh, there's lots more where they come from," Spud insisted, carelessly. "Anybody that's big enough to buckle on a pair of overalls can mill lumber!"

"Does Miss Clyde come to see you often?" Gantry asked, as he was leaving.

"She sure does." Spud wrinkled his forehead and flushed. "And say, boss!"

"Well?"

"It ain't any of my put-in, I guess, but I got to tell you that if a fine lady like that was to fall for me as hard as Miss Mary has fell for somebody I know that ain't a thousand miles from here right this minute, I'd buy me a ring for her, if I only had eight dollars. There, I'm glad I got that off my chest!"

His embarrassment was real, but not more so than his satisfaction at what he evidently considered a duty well done. Gantry took the boy's hand and gave it a hearty shake.

"Thanks for the tip, Spud!" he said, cordially. "But the lady might have something to say about that. Take care of yourself, now, and if there's anything you want, let us know."

Riding homeward that evening, down the long, dark canon through the light snow that lay where usually there were twenty-foot drifts, Gantry had nothing to say to Hugh Arnot, the garage mechanic who drove.

He was thinking of Kathleen Maynard and Mary Clyde, and he knew no more than the grimy and care-free driver what he thought nor which way his heart would lead him.

III

On the previous Sunday evening Defoe Brant, the mill boss from Fack's, had been more sober in the instant that he had thrown the lamp at Noel Thomas's head and leaped from the cabin window than he had been all that day, or than he was for some considerable time thereafter. In that second he had seen death in the face of the young woods boss; he had realized his own helplessness, dulled from drinking and weakened by the pain of the tearing bite Romp, the hound, had taken in his leg; he had fled incontinently and thereby saved himself.

But he did not run far. Sober, or

even half-drunk, he was a better man than any square-headed lumber-jack or straw boss, and as soon as he could get himself steadied with a drink or two he would prove it. He made, therefore, for the shanty of Portygee Louis, a camp follower of the logging business, and in two hours was so drunk that he could not remember his mission, or, indeed, his own name or station.

Portygee Louis at the time was entertaining guests from afar—a gambler from the city, and a stage driver who had contrived to get himself suspected of complicity with a band of thugs in the hill country below; the three of them had money and Louis had liquor. They formed a congenial party and for seven solid days they rioted—boasting, quarreling, fighting, making it up, and drinking again. By Sunday morning the liquor supply was exhausted; by noon of that day Defoe Brant began to remember his obligations, and on Monday morning he crawled out early from the frowsy bunk in which he had been sleeping, when he slept, and swung off through the woods towards Fack's mill.

At no time a pretty object, the mill boss was now disreputable and even fearsome. His week's growth of beard was matted, his eyes sunken and blood-shot, his clothes dirty, and one cheek was torn as the result of an argument with the stage driver, who had armed himself with a bottle. Brant was not entirely sober, but he believed he was. He was irritable—sullen. Thomas, the woods boss, was the cause of his plight. He had spent all his money and lost a week at the mill, when he should have been there driving the crews to empty that log pond again! Young Thomas was an interloper and a sneak. He spied on his betters and interfered with their plans. As soon as Thomas was out of the way the road would be cleared for the mill-boss to return to his quest at Clyde's cabin. The man licked his lips. He was spoiling for a fight and for the reward he conceived that that fight would bring him!

He arrived at the mill as the whistle blew. Without hesitation he swaggered in and took charge from Bannister, who had been straw-bossing in his absence; the word ran through the mill that Brant was back, and from oiler to top Sawyer the men bent to their tasks, speeding up their machines until the mill sang.

IV

A few minutes before eight Craig Gantry had entered the mill to see Fack; inside the office he had found the bustling little owner in a conference with two men.

Instantly Craig recognized Sill Thurston; a moment's survey told him that the third man was Jere Broadhead, manager of the Gantry Mill

Machinery Company, Craig's father's old house.

Thurston wheeled around with a scowl—jerked a word at Fack. The latter rose.

"I'm busy, Mr. Gantry," he said. "Guess I'll have to see you some other time."

"All right, Fack," Craig said, easily. "I can wait. But if you should get an offer for the mill this morning better hold off until you have a talk with me. I imagine I can beat any bid that's made you by anyone else."

He turned to go. Broadhead stood up. Gantry could not remember ever having seen the man smile, when he had known him. Broadhead was squarely built, bullet-headed, blonde, and with the colorless face that is sometimes described in the vernacular as "sandy complected." He was smiling now, a forced smile, and he held out a flabby hand to Gantry.

"Excuse me, but I think we've met before, haven't we?" he asked.

Craig stood where he was. "There's no question about that," he said. "But as far as I'm concerned that entails no obligations now on either side."

Broadhead was taken aback. Sill Thurston came to his rescue.

"The time's coming, young fellow," he growled, "when your tongue will get you into trouble that your legs can't carry you out of." He turned to Broadhead. "I told you what sort of gratitude you'd get for being decent to Gantry, Mr. Broadhead," he observed. "Of course his talk about buying Mr. Fack's mill is hot air. Fack knows it is, as well as I do. So don't let that worry you—we'll go on with our plans for the consolidation—"

He was interrupted by a choked bleat from the mill whistle. It sounded as though some one had pulled the cord and then dropped it before the blast had risen to full. Instinctively Thurston cocked an ear—Fack rose. All of them listened for a breath.

Vaguely, confusedly, they knew something was wrong. They could hear machines slowing down as if their belts had been thrown off; there was a muffled shout or two; men were running. The four in the office plunged out, Fack leading, Thurston stepping on his heels.

A grinning lath-machine boy turned on the stairs to the saw-floor, shouting excitedly.

"Fight! Fight! The boss is lickin' that woods boss from Clyde's!"

He scampered on. Craig Gantry pushed by the heavier and older men ahead of him—leaped up the stairs.

Noel Thomas had found at last the man for whom he had been looking night and day since that Sunday evening in Mary Clyde's room. Forgotten the old feud between mill and woods gangs; forgotten the closing of the mill because of the emptied pond; forgotten insults, jibes, and wrongs; nothing was now in the mind of the young lumberman but the white countenance of Mary Clyde, and the brutal leer he had surprised on the face of

"The Sweetest Story Ever Told"

— The Story of —

Delicious Natur-Sweets for Health and Strength

YOU need them! No matter who or what you are.

Don't take our word for it. Read the following, and judge for yourselves.

Dr. Chas. B. McFerrin, Diet and Health Expert, Editor of McFerrin's Health Bulletin, Author and Lecturer, says:

"Millions of people have impaired digestion but do not know how to help themselves. The way is simple: eat the food that contains the maximum of nutrition and requires the minimum of nerve force to digest it. But you say 'What is such a food?' The answer is, 'Fruit Sugar.' Fruit Sugar is assimilated almost immediately with no tax on the digestive system. That is just the reason that I never leave home without a box of Porter's Trufood candy in my traveling bag. Two or three, or at the most four of these delicious candy bars which are absolutely free from refined sugar, furnishes me with a complete meal. I have not found it necessary to eat in restaurants or diners with this complete food, Porter's Natur-Sweets always so near at hand.

"Every school cafeteria should serve nothing but Porter's Natur-Sweets eliminating the other catarrh-forming candies. "Every workman's dinner pail should contain Porter's Natur-Sweets. "Every dessert at home should contain Porter's Natur-Sweets."

Live high and save money! When you are hungry, try this for your Health's sake.

Porter's NATUR-SWEETS with Bananas and Milk or Cream.

One of the finest, most delicious and nourishing meals you can eat can be quickly prepared as follows: Into a dish of milk or cream slice up two or three very ripe bananas, add one or two bars of Porter's Natur-Sweets crumbled up fine, mix slightly and eat the best meal ever. Eat this meal once a day for two weeks and note the decided improvement in your health.

Doesn't it make your mouth water to read the above?

Wm. A. McKeever, A. M., Ph. M., LL. D., the noted author, lecturer and editorial writer, former editor of the Golden Rule Magazine, Chicago, Ill., and now with the Chicago American, writes:

"I regard Porter's Natur-Sweets as the greatest achievement of its class to be accredited to the present century. It is Child Conservation of a new kind entirely. To have the use of a candy that is at the same time a perfectly wholesome food, and to be able to satisfy the child's desire for sweets with such a rare, nurturing delicacy—that is to me the fulfillment of an earnest, long-felt dream."

Nashville, Tenn.: "I received today my first shipment of your wonderful Natur-Sweets. In all my life I never tasted anything as good, and am glad to say the package is exactly right."

Porter's NATUR-SWEETS can be used in many delightful ways.

"The Sweetest Story Ever Told" gives a number of recipes for their use and contains much valuable and interesting information. Send for your free copy.



George G. Porter

No home should be without a box or two of Porter's NATUR-SWEETS always on hand for emergencies, and to satisfy the natural craving for sweets.

Porter's NATUR-SWEETS are candies and Health Foods combined. They are made from Honey—the nectar of the flowers—sweet, dried fruits, and nuts. They are made in a scrupulously clean and sanitary manner. They are very high grade confections, for particular people. When actual food values are considered, they are very economical to buy.

There are four varieties of Porter's NATUR-SWEETS, and a Honey-Chocolate confection—Raisin-Nut, Fig-Nut, Date-Nut, Coconut and Honey-Chocolate.

They are supplied in dainty pieces, called JOY NUGGETS, and in Bar form.

The JOY NUGGETS are put up in attractive one-pound boxes, containing a full assortment, and tied with raffia, price 80c.

The Bars are wrapped in attractive, wax paper lined foil wrappers. They are packed in attractive boxes tied with raffia, 20 to a box, net weight 1 1/4 lbs., price 5c a Bar, \$1.00 a box. You can get a box of 20 Bars of one variety, or a full assortment, four Bars of each variety.

Other flavors will be added from time to time. Get them from your dealer. If he cannot supply you, we will send you a box and full information, postpaid anywhere in the U. S., on receipt of price and your dealer's name. **Six \$1.00 Boxes for \$5.00. FOR YOUR HEALTH'S SAKE, get yours today. Buy them by the Box. Do It Now.**

MAKE MONEY—AGENTS—CLUBS—SOCIETIES

Good money in selling Porter's Natur-Sweets in a variety of ways, such as house-to-house, in office buildings, factories, stores, clubs, school cafeterias, colleges, Y. M. and Y. W. C. A. establishments, church organizations, picnics, camps, Boy Scout and similar headquarters, etc. Easy to get a line of regular customers buying by the box. Write for full particulars on our agency proposition.

FOR SALE IN CHICAGO at the McLean Drug Store; the Public Drug Company, 26 South State St.; The Fair, Candy Department, the Healthies Natural Food Stores, 23 E. Van Buren St., and 2731 N. Clark St.; Berhalter's Health Food Store, 1423 N. Clark St.; Lindlahr Sanitarium, 525 S. Ashland Ave.; Capital Bldg. Cigar Stand, and other stands.

PORTER'S TRUFOODS, INC.
Dept. S., 159 N. State St., Chicago, Ill.
Gentlemen:

Enclosed find \$..... for which send me follows..... boxes of your Natur-Sweets, _____ Coconut, Raisin-Nut, Date-Nut, Fig-Nut, Honey-Chocolate, Assorted. (Cross out those not wanted)..... Boxes of Assorted Joy-Nuggets.

Name.....
Street.....
City..... State.....

Newest and Greatest System in the World STAY YOUNG

Newly Discovered Laws of Human Life
Conserve Your Vitality, Vim, Vigor

Don't think that you've read "something like it" or "just as good." Every new reader says: **IT BEATS ALL.** Particulars FREE.

LIBERTY PUB. CO.
Sta. D, Box 4048, Cleveland, O.

FOOL YOUR FRIENDS HOW TO BE A VENTRILOQUIST

Shown by new Scientific Method. You can mystify your friends and make money. EASY to learn. Trifling cost. Write TODAY for FREE information.

WHITTLE INSTITUTE OF VENTRILOQUISM
Dept. 56. Bloomfield, N. J.

WANTED

RAILWAY MAIL CLERKS
\$1600 to \$2300 a Year
MEN—BOYS 17 OR OVER SHOULD
MAIL COUPON IMMEDIATELY

Steady work. No layoffs. Paid Vacations
Common education sufficient:
TRAVEL—SEE YOUR COUNTRY



FRANKLIN INSTITUTE, Dept. L-183, ROCHESTER, N. Y.
Sirs: Send me without charge, (1) Sample Railway Mail Clerk Examination questions; (2) Send list of U. S. government jobs now obtainable; (3) Send free illustrated book, "How to Get Government Jobs."

Name.....
Address.....

A PERFECT LOOKING NOSE**Can Easily Be Yours**

Trados Model No. 25 corrects now all illshaped noses quickly, painlessly, permanently, and comfortably at home. It is the only safe and guaranteed patent device that will actually give you a perfect looking nose. Over 87,000 satisfied users. For years recommended by physicians. 16 years of experience in manufacturing Nose Shapers is at your service. Model 25 Junior for children.

Write for free booklet, which tells you how to obtain a perfect looking nose.

M. TRILETY, SPECIALIST
Dept. 2081 Binghamton, N. Y.

JOY FOR STOMACH SUFFERERS

I positively guarantee

MACERATED WHEAT

to relieve the worst cases of stomach trouble and banish constipation or it costs you nothing. Soothing to weak stomach as a poultice to inflammation. Testimonials without number. My reputation of 25 years backs my guarantee. Write for proof.



BYRON TYLER (Established 1899)

110 Gibraltar Bldg. Kansas City, Mo.

TOBACCO**Habit Cured or No Pay**

Any form, cigars, cigarettes, pipe, chewing or snuff. Guaranteed. Harmless. Complete treatment sent on trial. Costs \$1.00 if it cures. Nothing if it fails. **SUPERBA CO. L-18 BALTIMORE, MD.**

AGENTS 90% Profit
BIG MONEY AND FAST SALES

Every owner buys Gold Initials for his auto. You charge \$1.50, make \$1.35. Ten orders daily easy. Write for particulars and free samples.

American Monogram Co.,
Dept. 250 East Orange, N. J.

STAMMER

If you stammer attend no Institute till you get my large FREE book entitled "STAMMERING, Its Origin and the Advanced Natural Method of Treatment." Ask for special tuition rate and a FREE copy of "The Natural Speech Magazine." Largest and best school for stammers in the world. Write today. Millard Institute of Normal Speech, 2377 Millard Bldg., Milwaukee, Wis.

30 DAY TRIAL **FINE STROP FREE**

We will send a STERLING razor on 30 days trial. If satisfactory, costs \$1.97. If not, costs nothing. Fine Horsehide Strop FREE. Write today. STERLING COMPANY, Suite 25, BALTIMORE, MD.

Stop Using a Truss

STUART'S PLAPAO-PADS are different from the truss, being mechanic-chemical applicators made self-adhesive purposely to hold the distended muscles securely in place. No straps, buckles or spring attached—cannot slip, so cannot chafe or press against the pubic bone. Thousands have successfully treated themselves at home without hindrance from work—most obstinate cases conquered. Soft as velvet—easy to apply—inexpensive. Awarded Gold Medal and Grand Prix. Process of recovery is natural, so afterwards no further use for trusses. We prove it by sending Trial of Plapao absolutely **FREE**



Write name on Coupon and send **TODAY**.
Plapao Co., 610 Stuart Bldg., St. Louis, Mo.

Name.....
Address.....

Return mail will bring Free Trial Plapao.

the drunken mill foreman. He was in the enemy's camp, and now the mill-men were gathering quickly—coming from every direction, many of them ready to go to the assistance of their boss, irrespective of the rules of fair play;—Noel Thomas saw them all, but he paid no more heed to them than though they had been so many leaves whirled by a sudden wind.

He and the savage, lumbering Brant had exchanged blows and were coming together again when the four from the office floor arrived. But so sudden had been the encounter and so quickly had the word of the fight flown that the sawyer, ridden by habit, had not yet stopped the log carriage. Back and forth it flew, the man gaping at the fight and operating the heavy and swift shuttle on which the log lay and sending the big butt against the whirling band saw, unconscious of what he did. The setter on the carriage—the man who regulates the thickness of the cut from the log—was screaming at him; the two doggers clung to their handles and were almost whipped off the carriage as it reversed and reversed and sped on, back and forth.

Brant, snarling like an uncouth animal, cornered, lashed out viciously and his blow found Noel Thomas on the point of the shoulder. Thomas twisted forward, caught the mill boss off balance, and sent home a crashing blow to the face. Brant reeled backward.

A chip of water-soaked pine lay under his heel and he slipped and fell. His head came to the very edge of

the carriage track—half a dozen men shouted at once.

A dogger, excited and unnerved, let go his handle. The dog was released on the log which shifted an inch towards the saw. The speeding band tore into the deep cut, slowed down a fraction—screamed like a living thing.

Then, in a thousand places at once, the brittle steel of the immense band snapped.

What length was left on the two great wheels of the saw whirled the murderous ribbon about, entangled it, snapped it off into more deadly bits. These flew to the uttermost parts of the mill.

Men ran, shouting—grey with fear. The carriage threw the three men on it in three directions, head over heels. The sawyer sank to the floor, covering his ears and sobbing.

It was as though a machine-gun had poured into that second floor, not bullets, but heavy and razor-sharp knives—the bits of the saw band—at the speed of lightning and with the force of a catapult.

Men were cut—struck—grazed—stabbed—everywhere.

But one jagged, whirling piece flew home.

Defoe Brant yelled horribly, and they looked to him, and saw him lying, his head gashed deep and a foot-long fragment of the saw buried in his left shoulder, at the base of the neck, and singing there still—carmine with his blood!

(To be concluded)

Outing Eating

(Continued from page 47)

a veritable shoestring several miles in length, embracing the great cliffs of the Hudson and the slopes from their base down to the river's edge. Large numbers of people are camping there for days, weeks and months during the spring, summer and fall; and on Sundays and holidays, many hundreds, perhaps thousands, cross the river at the Dyckman Street, Edgewater and Yonkers ferries or in their own boats, to spend the day in the open. I have walked to and fro through that park on many occasions; and I have been impressed by the evident obsession of a majority of the outers that they go there primarily to eat.

As soon as a party disembarks from the boat, it makes a rush for some favorite camping spot, which usually includes one of the rough stationary tables found in considerable numbers along the water side trail. Here they at once begin gathering wood for a fire, and thenceforth almost the entire day is spent in cooking and eating. I have passed up the trail from the Dyckman ferry at nine or ten o'clock in the forenoon and noted this, that and the other party already hunkered over a table, eating ravenously; and have come back at three or four P. M. to find them still eating—that is, those who hadn't become so drugged by food that they were lying, snoring and gross-looking, on the

grass. Whether these folk had been eating continuously all day or whether they had had any rest periods I can't say; but I do know that the quantities of food which I have seen conveyed to these camping spots by relatively small groups of people would blanch the face of a dietitian with horror.

I can excuse the voracity of growing boys and girls (of whom there are large numbers among these Palisades outers), for at their age they seem to be hollow plumb to their toes, and a tremendous number of calories is required to counterbalance their ceaseless activity and build up their growing bodies; but for grown people to stuff themselves until their livers become suitable filling for a pate de foie gras is little short of criminal.

My favorite form of outing has always been walking—"by the day, week or month." I could not have done as much of it as I have if I were not a comparatively light eater; and I would not have become so enthusiastic a propagandist for light eating had it not been for my experience as a hiker. My one-day walks have sometimes carried me as far as thirty miles or more, but for the truest enjoyment of nature and scenery, they should by no means cover more than fifteen or twenty miles.

Much of my hiking has been done

In the Southern Appalachian Mountains—in Tennessee, North Carolina, northern Georgia and Alabama. I lived for several years in a city beautifully situated among mountains and foothills, where every Sunday and holiday was an invitation to the out of doors. My wife and I, in company with a group of other seasoned hikers, knew every trail, spring and cabin within thirty miles of the city, even as we knew our own streets. And when our crowd decided by telephone on a bike for the following Sunday, the lunch was the least of our worries. Everybody carried his own. If the men wore their coats, the lunch could usually be carried in a coat pocket. Sometimes when my wife did not go along, I have carried my own lunch in the two breast pockets of my khaki shirt.

Those days in the Southern mountains are over; and we are now hiking among the highlands of the Hudson, of Westchester County, of Staten Island and of northern New Jersey. But the standard lunch of Friend Wife and I remains the same as on our Tennessee tramps. Roughly, the noon lunch ration for each of us is something like this:—

One sandwich (rather undersized) of ham or breakfast bacon or peanut butter.

One sandwich filled with cottage cheese or marmalade.

One small slice of cake, or two cookies.

One small orange, apple or banana.

Vacuum bottle full of coffee, postum, cocoa, or in hot weather a mixture of iced tea and lemonade. A pint bottle of the hot drink or a quart of the cold suffices for both of us.

In the Southern mountains we didn't always take the vacuum bottle along if we were going where there were plenty of good springs, unless it was a cold day and we felt the need of a hot drink. But here in the more thickly settled country around New York City we are suspicious of most of the springs, and the vacuum bottle usually goes with us.

Lately my wife has had a happy thought; why it never came to either of us before I don't know, for we have been eating avocados for years. Instead of a sandwich, we just put in an avocado (I positively refuse to call them by the silly and meaningless term, "alligator pears"), a pinch of salt and pepper in a folded paper and a dab of mayonnaise in a tiny glass or carton. The bulk is a bit larger, but to us that delicious, nourishing avocado is so much better than any possible sandwich that the slight addition to the lunch package is more than paid for. At lunch time we just split the fruit and each eats a half with a bread-and-butter sandwich.

Such a lunch as I have outlined does not slow up one's walking capacity. If necessary, you could start walking again immediately after eating it, and feel little inconvenience. But we always give at least three-quarters of an hour to the lunch period, unless we are in a hurry to reach a certain objective. A comparatively light lunch like this,

Lindlahr Nature Cure Institutes

Only Organization Maintaining Both City and Country Sanitariums

LINDLAHR SANITARIUM
Dept. C, 509-529 S. Ashland Blvd., Chicago

LINDLAHR HEALTH RESORT
Elmhurst, Illinois



Health Restored—Strength Regained

Twenty years' record for splendid success in the treatment of chronic diseases. Every disease known to man is curable by the proper combination of *natural* methods of diagnosis and treatment, provided there is sufficient vitality left to respond to treatment and that the destruction of vital parts and organs has not advanced too far. In our method of examination, as well as in treatment, we combine all that has proved true and efficient in all systems, from the oldest to the most advanced, whether "orthodox" or "irregular," provided it conforms to the fundamental laws of cure. No drugs, no surgical operations.

Some of Our Healing Factors

All natural methods of healing are applied strictly in accordance with individual requirements. Among our healing factors are:

DIET reduced to exact science, adapted to any constitution and disease—pleases the palate, eases the digestion, unexcelled anywhere. Milk, Fruit, Vegetarian and other diets, including fasting.

HYDROTHERAPY: Douches, sprays, packs, compresses, etc.—Father Kneipp and other systems. Sun and air baths.

MANIPULATIVE METHODS: Osteopathy, Chiropractic, Neurotherapy, Spondylotherapy and other methods, including Massage, Magnetic Treatment, Corrective Gymnastics and Breathing Exercises by competent instructors.

HOMEOPATHIC AND NON-POISONOUS HERB REMEDIES.

MENTAL THERAPEUTICS: Applied Psychology and suggestive treatment on a common-sense, scientific basis.

Electric and Electronic Methods of Diagnosis and Treatment

Radiant Light and Actinic Ray: These are more powerful in their effects than direct sunlight, and are used for general tonic treatment and for local applications.

Morse Wave: The latest improvement on sinusoidal electrical treatment for weak, atonic and prostrated conditions of the digestive and female genital organs.

High-frequency Electricity: For the oxidation of disease matter as well as for general tonic and curative effects.

Chrome-Therapy: One of the latest and most efficient methods of natural treatment.

Orificial Treatment: By bloodless manipulative methods.

Frequent lectures by Dr. V. H. Lindlahr and his able assistants teach you how to become your own doctor and the family physician for the future.

Send Coupon for Catalog

Lindlahr Nature Cure Institutes, Inc.

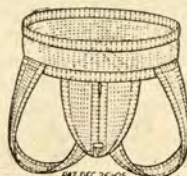
Dept. E, 509-529 S. Ashland Blvd., Chicago, Ill. Please send me free and postpaid your catalog of the Lindlahr Sanitarium (Chicago) and the Lindlahr Health Resort (Elmhurst, Ill.), also literature describing natural healing methods, including information about the MARATHON BATH.

Name.....
Street and No.....
City and State.....

THE MARATHON BATH or Blood Wash Treatment

We are now prepared to give this wonderful new **REJUVENATING TREATMENT**, strongly recommended by "Strength." It invigorates—corrects blood pressure—reduces weight; also decreases the time of ordinary treatments.

MIZPAH JOCK No. 44



Gives you a feeling of real comfort and the assurance of perfect protection while exercising or playing games of any kind. All elastic. Perfect fit. Will not chafe. Perfect pouch. Patented opening in front. May be boiled to cleanse.

TWO WEEKS' TRIAL If not satisfactory return and money will be refunded. Mailed on receipt of price, \$1.00. State waist measurement.

THE WALTER F. WARE COMPANY, Dept. J
1036 Spring Street (above Race) Philadelphia
For sale also at Sporting Goods and Drug Stores

Deafness



Perfect hearing is now being restored in every condition of deafness or defective hearing from causes such as Catarrhal Deafness, Relaxed or Sunken Drums, Thickened Drums, Roaring and Hissing Sounds, Perforated, Wholly or Partially Destroyed Drums, Discharge from Ears, etc.

Wilson Common-Sense Ear Drums
"Little Wireless Phones for the Ears" require no medicine but effectively replace what is lacking or defective in the natural ear drums. They are simple devices, which the wearer easily fits into the ears where they are invisible. Soft, safe and comfortable. Write today for our 168 page FREE book on DEAFNESS, giving you full particulars and testimonials.
WILSON EAR DRUM CO., Incorporated
12.8 Inter-Southern Bldg. LOUISVILLE, KY.

Personal Magnetism

Personal magnetism, will power, nerve force, stamina—call it what you will—is the intangible power that controls human destiny, it is the key to all business and social success. If you come in contact with people, you cannot afford to be without this knowledge. It gives you an inestimable advantage over others. By our system you can develop your Personal Magnetism at your own home. We guarantee it. Intelligent people the world over are studying this wonderful force, and those who master it, achieve increased success. **FREE BOOK** tells you how you can master it at home. Do not send any money for it. The book is absolutely free and is sent to advertise our institution.

THE FLINT COLLEGE CO.

Dept. 579

Cleveland, O.

SPECIAL BARGAIN



MASSAGE ROLLERS ELASTIC CORD, Double Row of Balls

SCIENTIFIC MASSAGE for ATHLETES, by JOSEPH FAY. The book covers the whole question of massage on the muscular system, illustrated by PHOTOGRAPHS and DIAGRAMS.

THE RIGHT WAY TO LIVE, by STEVE ONOFRYTON, light-heavyweight champion wrestler of CANADA. SCIENTIFIC COURSE on HEALTH and PHYSICAL FITNESS.

ALL FOR ONLY \$2.25, with ILLUSTRATED CATALOGUE—showing 50 different styles of apparatus. Money refunded if not satisfied. Order TODAY.

ONOFRYTON BROS., 89 State Ave., Pontiac, Mich.

BREATHE FOR HEALTH Beauty, Vigor and Vitality

Complete directions, sealed, for 10 cents, including an interesting experiment which demonstrates and proves that the activity of the SUBCONSCIOUS MIND is capable of producing actual chemical change in the human organism. This subconscious mental activity may be caused to produce any desired condition in individual life and environment. Write today to J. A. Elchwaldt, ST74, Fruitvale, Oakland, Calif.

30 DAY TRIAL SAVE BARBER BILLS!

CUTS TRIMS BOBS

FAMILY BARBER OUTFIT

High Grade Close Cutting Steel Clippers, Fine Barber Comb and Regulation Steel Barber Shears. A guaranteed full size, high grade, finely finished, durable, practical outfit. Fine for Cutting, Shaving, Trimming Hair or Necks. Save and Earn Money Barbering your family and friends. Mothers can save Time and Money Cutting or Shaving Children's Hair. Our Regular price \$4.00. Special price only \$1.95. Order today. When outfit arrives, pay postman only \$1.95 and postage. Try outfit for 30 days. If dissatisfied, return in good condition and amount paid for outfit will be refunded. If you wish to save postage, send \$1.95 with order and try outfit under same guarantee. STERLING CO. H-18 Baltimore, Md.

FOR FUN OR MONEY— VENTRILLOQUISM

taught almost anyone, at home. Small cost. Send Today 2c stamp for particulars and proof.

GEO. W. SMITH, Room M-878, 125 N. JEFFERSON AVE., PEORIA, ILL.

Wrestling Book FREE

Learn to be an expert wrestler. Know scientific wrestling, self-defense, and Jiu-jitsu. Develop a splendid physique, and have perfect health. Join this popular school and learn by mail. The famous world's champions—the marvelous **Frank Gotch and Farmer Burns** offer you a wonderful opportunity. Wrestling is easily and quickly learned at home by mail. Men and boys write now for splendid free book. Learn all the science and tricks. Be able to handle big men with ease. Accept this wonderful offer NOW. Send for free book today, stating your age.

Farmer Burns School of Wrestling, B-345 Rampe Bldg., Omaha, Neb.

BE A RAPID-FIRE TRICK CARTOONIST

BUY COMPLETE COURSE, including 40 Clever Cartoon Stunts, "How to Give a Performance," "How to Originate Ideas," Sample 15c. Modern Cartoon Service, Dept. D., 296 Bergen St., Brooklyn, N. Y.

combined with the period of rest, is refreshing and stimulating, whereas a heavy one would tend to make one sleepy and sluggish.

Some of us used to go on long hikes of a week or two through the highest and wildest of the Tennessee-Carolina ranges, carrying our entire outfit on our backs and sleeping out of doors whenever necessary, though sometimes we had a chance for a bed in a lumber camp, a mountaineer's cabin, a shuckpen or a deserted herder's cabin or bark shelter. When a coat, a poncho and a double blanket or sleeping bag are necessary parts of one's equipment (to say nothing of the camera, which seems almost inevitable), it is imperative that the cooking outfit be reduced to the minimum, and the food be made as light in weight as possible. Remember that one is struggling through rhododendron and brier thickets, across precipitous gorges, and up and down the steep, rocky slopes of peaks whose summits are often 6,500 feet or more above sea level. When there are only two people in the party (as has been my experience) the individual pack becomes proportionately heavier. And I have never seen any reason in making it so heavy that the trip becomes hard, gruelling work rather than play.

Impelled by these considerations to study the problem carefully, we took a leaf from the book of wisdom of the Japanese army, and made unpolished rice our principal food on such trips. Rice is light in weight, easily prepared, digestible, nourishing, satisfying. We took along a small aluminum double boiler in which to cook it. In addition to the rice, we generally carried a slab of breakfast bacon, a tin box of hard-tack (the tin was necessary to protect the crackers from mountain dampness and breakage), a can of instantaneous coffee, some cheese, condensed milk, sugar, pepper and salt. We might take a loaf of bread and two or three cans of vegetables or fruit to eat on the first day out; but (especially if there are only two in the party) bread is too bulky and tinned goods are too heavy to carry far.

Thereafter to a limited degree the country assisted in feeding us. If we found a mountaineer's house where we could get a meal or two and stop overnight, that was a distinct advantage; but such places were infrequent on the routes we chose. Again, when we passed a country store, we usually bought some canned goods, perhaps sardines, salmon and fruit, enough to vary the diet for the next twenty-four hours. We picked up all the fresh fruit we could find on the way, and as we usually made these trips in the fall, there would be plenty of chestnuts everywhere in the woods. We filled every nook and corner in our rucksacks with these; at the night halt we would boil them, making them much more digestible, and stow them away in the packs for use next day. It was a Spartan sort of life, yet not too austere—and it was wonderfully rich in its rewards.

We carried this simplicity in eating

—in somewhat milder degree, of course—over into our occasional week-end camping parties. Four or five or six of us used to leave town on a Saturday afternoon in one or two automobiles and dash into the mountains, turning into dimmer and yet ever dimmer roads and trails, sometimes appallingly steep and rocky, not infrequently turning out into the woods to get around a fallen tree, and finally bringing up at some beautiful and fondly-remembered nook, miles from nowhere, but with a good spring and some fine hiking territory adjacent. On Sunday there would be two long rambles, one in the morning and one in the afternoon.

Our camping arrangements were simple. We had a tent but no cots; dead leaves or pine boughs under a blanket furnished us a bed. A tin pie pan, tin cup, cheap knife, fork and spoon was each man's eating equipment; a log or a rock was our only table. Again rice would be our staple article of diet. But now we could indulge in other things a bit more freely—bacon, eggs, fresh bread, potatoes both Irish and sweet roasted in the ashes, and cookies and fresh fruits from home. One rude delicacy which we savages enjoyed was a mixture of Mexican chile con carne and rice. We would take a few tins of the chile, heat them in boiling water, then mix the stuff on our plates with the rice. The chile "gravy" converted the rice into a very savory mess.

We never ate anything on these trips which called for elaborate preparation and nothing which required long cooking save the rice. Our beverages were usually limited to coffee and spring water, unless we discovered a cabin in the neighborhood where we could buy buttermilk, which we always did with ill-concealed glee. With the invention of instantaneous coffee, the necessity for the coffee pot has been done away with, and I cannot see why any hiker or camper ever uses one any more.

The camper should never lean very heavily on tinned food, especially meats, if in camp for a protracted stay, as they will not agree with one so well when taken in quantities. Your camp diet should be more than fifty percent fresh food—in which may be included, of course, all package cakes and crackers. Genuine whole wheat bread, if it can be procured, is one of the finest of all camp foods. Don't eat too much fried food, don't drink much tea or coffee, hold back on the sweets and knickknacks, and above all, don't eat too much food of any kind. In fact, the rules for camp eating are practically the same as for your eating at home, save that your camp allowance would naturally be slightly larger. But a case of indigestion or biliousness in camp ought to be as absurd as frostbite in tropical Africa.

What is true of a camp is true of any picnic or other brief outing. An alleged love of Nature and the need for recreation are used as alibis for many a crime against the human digestion. If one could only keep in mind the difference between outing and eating!

Growth and Strength Through Food

(Continued from page 23)

carried his, prove that on the whole wheat bread the rats thrive long after the white flour bread rats are dead.

Obviously there isn't a very wide margin of safety in a white bread diet. The rats didn't find any in the Bunge experiment. They have never found any in our own laboratory.

The refined dietary of many American families is characterized by a margin of safety just as narrow. This simple fact, which anybody can understand, though it is never considered in the so-called "balanced diet" philosophy, should inspire parents to include in the breadstuffs consumed by their children as much as possible of those parts of the grain rich in the elements of life, notwithstanding the practise of modern civilization in removing such elements.

The presence of these elements which mean so much to the health of rats is of far more importance where the diet of children is concerned, for the reason that the effects produced on rats are precisely those produced on children.

In the face of this truth it is impossible to ignore with feelings of comfort or safety the wilful waste of a national milling system that takes one hundred pounds of whole wheat, and, after bolting through grits gauze and sifting through silk cloths, reduces it to seventy pounds of refined white flour.

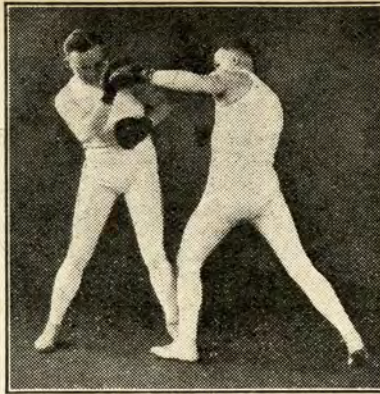
The same hundred pounds of whole wheat will yield thirty pounds more of flour equal in nutritive value, pound for pound, if the tissue-sweetening mineral salts are ignored altogether, and a hundredfold superior if the tissue-sweetening salts are considered as they should be considered.

It is indeed true, as some professors assert, that white bread is absorbed in less time than whole wheat bread. This fact, they say, is proof of the superior digestibility of white bread.

But water requires less time for absorption than white bread, and it follows, therefore, that water should be preferred to bread of any kind.

The time required in the digestion of any natural food is not a factor to be reckoned with. Time has nothing to do with physiological balance. Not time, but health, growth, strength and resistance to disease should constitute the standard of measurement. Whole wheat bread, including the bran and germ, gives to the body elements that the body needs.

In a truly "balanced diet" in which the alkalines more than offset the acids, one may eat anything that appetite suggests, provided the selection is made from whole, unrefined food, fully matured, preferably in season than out of season, and with full consideration of the important essentials summed up under the heading of mineral salts found in wholesome milk, whole grains, greens, vegetables, and ripe fruit.



Mike Gibbons blocking left hook led by Tom Gibbons. Illustrations in the lessons are four times bigger than this photo

and earn a fortune with your fists. Mike Gibbons will teach you the stuff that will help make you a topnotcher who can get big money for boxing. He taught Tom Gibbons, Jim Delaney, Johnny O'Donnell and other first-class boxers. He can teach YOU.

HOW TO TRAIN CORRECTLY

Complete schedule of training for boxing. Shows you how to do road work and gym workouts, shadow boxing, rope skipping, how to strengthen stomach, punch the bag, build up all muscles and develop wind and speed. Also how to take weight off without going stale, what to eat, how to tape hands, etc. The course tells just what a boxer must do from the first day of training up to the time of a bout. Seconds are taught how to properly handle a boxer in a bout and the latest complete boxing rules are given. Expert information on preparing for championship bout. Illustrated with pictures especially posed by Mike Gibbons. **THIS COURSE IS VALUABLE FOR ANYBODY WHO DESIRES TO MAKE HIMSELF PHYSICALLY FIT IN A SHORT TIME.**

ONLY \$1.00 EACH For advertising purposes the price of these two books has been cut to \$1.00 each for a limited time. Send \$1.00 for book "How to Box," \$1.00 for book, "How to Train"—or \$2.00 for both—with your name and address written plainly, and get what you want by return mail. Send to Mike Gibbons, Dept. S, Gibbons Gym, St. Paul, Minn.

NEWEST, QUICKEST and BEST WAY TO LEARN HOW TO BOX

MIKE GIBBONS' latest ten complete lessons show how to deliver jab, hooks, uppercuts, and all punches used by world's greatest boxers. Also how to block, slip, duck, sidestep and avoid all blows. All the successful tricks of clinching, infighting and feinting—How to deliver a knockout punch—All the inside defensive tricks which enabled TOM GIBBONS to avoid Champion Jack Dempsey's knockout punches for 15 rounds. **FULLY ILLUSTRATED WITH SPECIAL PHOTOS OF MIKE AND TOM GIBBONS.** Easy to learn. Will make you clever boxer and hard hitter in short time.

EARN \$50,000 A YEAR AND MORE

LET MIKE GIBBONS SHOW YOU HOW. Good boxers now earn more money than ever before. Jack Dempsey will earn a million dollars this year. Other champions make up to \$500,000. Any high-class boxer can make \$50,000 a year. You may have the makings of a champion or topnotch boxer. Mike Gibbons will teach you the stuff that will help make you a topnotcher who can get big money for boxing. He taught Tom Gibbons, Jim Delaney, Johnny O'Donnell and other first-class boxers. He can teach YOU.

EARN MONEY AT HOME

YOU can earn \$1 to \$2 an hour in your spare time writing show cards. No canvassing or soliciting. We instruct you by our new simple Directograph System, supply you with work and pay you cash each week. Write today for full particulars and free booklet.

WEST-ANGUS SHOW CARD SERVICE LIMITED
Authorized Capital \$1,250,000.00
238 Colborne Building, Toronto, Can.

TOBACCO HABIT

MAKE IT QUIT YOU

Not only is tobacco filthy and disgusting to your loved ones, but it contains a Deadly Poison which weakens heart, stomach, lowers vitality and invites diseases that may shorten your life. **STOP!** Regain Vigor, but don't shock your system by trying to quit unaided.

EASY TO QUIT

It makes no difference how long you have used tobacco, whether cigarettes, pipe, cigars, chewing or snuff, **Nix-O-Time** (Wonderful Sanitarium treatment in new tablet form conquering thousands of worst cases) will free you from the craving quickly and for good. No more desire for tobacco. Harmless. Guaranteed. **Sent On Trial Postpaid.** Small sum if cured. Not a cent if it fails.

Write today for full remedy on trial.

PERKINS CHEMICAL CO., Dept. 63, Hastings, Nebr.

DOUBLE YOUR STRENGTH INCREASE YOUR WEIGHT

A MAN should have SOMETHING! But he can't get it by sleeping. Nor by moving gingerly in weak-kneed calisthenics. A MAN must have real EXERCISE! Something to make him clamp his jaws. Something to set his pulses pounding. Something to so fill him with energy that he'll feel like roaring, just for the sheer joy of life and strength.

Weights Necessary

The ONE way to build this kind of health is by "muscle resistance." By that I mean, pitting your available strength against the forces of gravity. It is Nature's own way. When you manipulate a heavy weight, you are matching your muscles against the pull of gravity on the weight. You find difficulty in handling it. Nature comes to your rescue and adds some more tissue to those muscles. When you next handle the weight, see how much easier you can control it.

Increase Weight

Then add a few more pounds to the weight. Again, you will find difficulty in handling it. And again will Nature come to your rescue, adding more tissue to your muscles. Over and over again is the process repeated; increased weight; larger muscles. After a few months of this kind of exercise, you will no longer grumble; you'll GROW! you will no longer smile; you'll GRIN! You'll be a REAL MAN!

"New Strength-Maker Outfit"

If you will secure this exercise, you must have the proper apparatus. For years my "Strength-Maker" dumb bell outfit has been the standard for gymnasium and home. Now, however, I have devised an improved set known as the "New Strength-Maker."
The "New Strength-Maker" is a long bar bell, or a short bar bell, or two ring weights, whichever you wish; assembled in either of the models in a few seconds. For different exercisers, one model may be instantly changed to another. In this way, a great variety of exercises is possible, developing all body muscles uniformly, avoiding the "muscle-bound" condition, and giving a general tone of vital vigor to the internal organs.
The Strength-Maker Bar Bell outfit can be made light enough to be handled with ease by the most delicate constitution, and heavy enough to stagger the huskiest laborer. But their persistent use by that delicate constitution will result in an increasing set of toughened muscles and a vital flow of healthy blood that will soon put him in the "husky" class. A complete set of instructions comes with each of the "New Strength-Maker" dumb bell outfit, so that you may secure the full value that is possible to be obtained. The directions are clear, simple and to the point. They guarantee results.

Over 50% Off

This month I am offering my "New Strength-Maker" dumb bell outfit at more than 50% less than its list price! The regular price is \$35, but if you send in this coupon quickly, you will be able to secure the outfit for only \$17.00. This represents a clear saving of \$18.00, a chance you may never get again.

SEND IN THE COUPON TODAY

Prof. A. Barker, D. C., Health Gymnasium, Dept. A-3, 865 Sixth Ave., N. Y.

Please send me, immediately your "New Strength-Maker" Bar-Bell Outfit. I am enclosing \$17.00, in full payment in accordance with your special offer.

Name.....
Address.....
City..... State.....



The ring weight above can be made from 20 lbs. to 100 lbs.

PSYCHOLOGY

Health · Happiness · Success

The Greatest Inspirational Magazine Ever Published

Edited by Henry Knight Miller

PSYCHOLOGY throbs with human interest. It delves into every problem affecting health, happiness and achievement. It is a clarion call to hope; it reveals to you your latent powers; it points the way to attainment of Life's richest blessings.

POPULAR, yet scholarly, articles deal with such all-important subjects as:

FEAR and WORRY—How to Overcome Them.

HEALTH—How to Get It and Keep It.

SEX—The Normal Sex Life.

HAPPINESS—How to be Always Happy.

SUGGESTION—How to Influence Others; How to Build a Supreme, a Commanding Personality; How to Get What You Want.

AUTOSUGGESTION—How to Awaken the Giant Within.

SUCCESS—How to Achieve the Truest Success.

PSYCHOANALYSIS—How to Overcome Complexes; How to Analyze Yourself.

IN PSYCHOLOGY you will find inspirational articles that banish the blues; scientific articles on diet—what to eat, how to eat and when to eat for health and efficiency; breathing for health; exercises for reduction, for flesh-building, for enrichment of the blood, for overcoming colds and other negative conditions.

PSYCHOLOGY will unveil to you the possibilities of a triumphant, exuberant, dominant, commanding, full-orbed life.

You will enjoy the departments on the Drama, World Movements, Book Reviews, Humor, Personal Problems, etc.

What Some of Our Readers Say:

"Worth a Million Dollars to me."

"PSYCHOLOGY Magazine is my best friend."

"I have found happiness."

"Sold more goods the week after reading than six weeks preceding."

"Most helpful magazine ever published."

"Saved me from suicide."

"Has helped me more than words can express."

H. G. WELLS, says:

The coming hundred years or so will be, I believe, essentially a century of Applied Psychology.

It will mark a revolution in human affairs, altogether more profound and more intimate than that merely material revolution of which our great grandparents saw the early beginnings, and amidst whose achievements we live.

In this present twilight of human division and insecurity, amidst oppressions and strikes, shortages of goods and slumps in welfare, irreconcilable hatreds and the rumors of fresh wars, it is still possible for those who have faith and vision to foretell a new release of human life to a secure and world-wide peace, to a sufficient and happy production to satisfy all normal human needs, to a common life of generous activities and kindness and lively interests and enterprise and hope.

And it is along the line of a sedulous pursuit and a vigorous application of psychological science that this release is attainable and will be attained.

"PSYCHOLOGY Magazine should be in every home in America."

"PSYCHOLOGY Magazine has shown me the way to health."

300,000 Readers in Twelve Months

Thousands of readers are added monthly. You cannot afford to miss this virtual gold mine of precious thoughts. Subscribe **TODAY**.

The yearly subscription price is only Three Dollars (\$3.00). Read two issues. Your money will be cheerfully refunded if you do not agree that each issue is worth more than the yearly subscription price. What **PSYCHOLOGY** has done for others it can do for you. It will remake your life. A single article may transform your home and change the life of yourself, your children, your loved ones, from mediocrity to success, from misery to transcendent happiness, from sickness to health. You cannot afford to miss a single issue.

It will remake your life. A single article may transform your home and change the life of yourself, your children, your loved ones, from mediocrity to success, from misery to transcendent happiness, from sickness to health. You cannot afford to miss a single issue.

Science's Newest and Strangest Wonder

In order to introduce **PSYCHOLOGY**

Magazine to new readers, the publishers have arranged for a special edition of an amazing new six-lesson course in psychoanalysis which you can secure in connection with a year's subscription for only \$3.50. This course will enable you to lay bare your mysterious and astonishing "Hidden Self." By its aid you can psychoanalyze yourself and come face to face with your startling, undreamed of, subconscious being. Did you ever wake from a dream—startled—and wondering why you dream? Do you know that the ability to psychoanalyze these dreams will bring to light hidden secrets of your innermost self—secrets that show you how to turn failure into success? All this and much more you will learn from this amazing course which is called Your Other Self, as revealed by psychoanalysis.

SEND NO MONEY

It is not necessary for you to send a single penny in advance in order for you to receive your first copy of **PSYCHOLOGY** Magazine and this wonderful course in psychoanalysis. Simply sign and mail the coupon below and the magazine and the course will be sent to you by return mail. Then when the postman delivers the course, simply hand him exactly \$3.50 (we prepay all delivery charges), and then study the course for thirty days and if you are not fully satisfied with it at the end of that time you may return it and your money will be refunded in full and without question.

As this special offer is good for a limited time only, sign and mail the coupon today to

Psychology Publishing Co.,
Inc.,
Dept. S,
17 W. 60th St.,
NEW YORK,
N. Y.

