



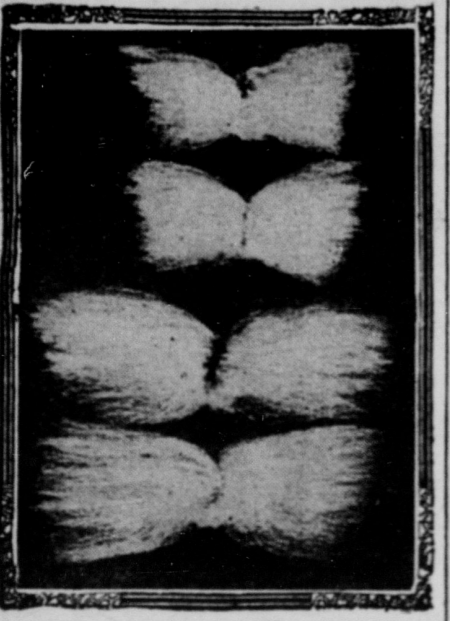
TO DOUBLE AMERICA'S COTTON CROP.

Startling Results of Patient Experiments by Government Agriculturalists.

GUY ELLIOTT MITCHELL
Department of Agriculture.

With the cotton crop of the United States reaching an annual value of nearly \$800,000,000 it is easy to see that the man who can make it worth four or five cents a pound more to the grower will put a few dollars of spending money into the pockets of the southern planter.

More like the old upland cotton than it is like Egyptian or Sea Island. The parent types from which it has been evolved are listed and carded in the department's collection, and each year as the fresh crops come in from the improved fields their output is carded for comparison. These new types have now reached a point where the records of the individual plants are known, the shape and opening qualities of the boll, the date of maturing, and the length and firmness of the cotton fiber and the degree to which the parent plant may be depended upon to transmit its desirable qualities to its progeny. The work has been done in the open field and not in the carefully tended plots of the experiment stations. Thousands of plants have been destroyed each year, and only the best types kept. These have again been weeded out the following year, and only the best of the breed have been kept. The farmers who have been co-operating with the department in the work have been as a rule careful, enthusiastic and painstaking under the direction of the experts sent into the field by the department, and slowly but surely the length of the staple and other desirable qualities in the new cotton have increased, till the department now feels it has a new and fixed type that can be depended on to perpetuate its desirable qualities.



ORDINARY COTTON STAPLE. SELECTED AND IMPROVED COTTON.

tural Department is certain. But there are always the factors of ignorance, indifference and prejudice to be reckoned with, and that will hold down the grand total of the advance. This is human nature. Otherwise every one would be raising thoroughbred stock, cats and chickens, which cost no more to feed and rear than scrubs, but everyone does not breed thoroughbreds, whether they be dogs or cows, and so it is a certainty that when the average of the cotton crop is vastly improved by the use of better seed there will be a large number of planters who are sticking to the old methods and complaining because they find it hard to make a living.

SEVERAL NEW STRAINS. It is a fact, however, that the Department of Agriculture has, by several years of persistent work, bred from the old varieties of cotton raised in the south several new strains of cotton that, while having all the desirable qualities of the old types, produce a staple that is almost a half longer. It is just one branch of the general industry of plant breeding, and the result, as shown by the cotton itself combed out in fleecy whiteness on a black card, is a striking object lesson in the possibilities of plant breeding.

The Department has been at the work for some years, and in the course of its experiments has handled thousands of samples and hundreds of thousands of individual plants in making the selections that are now considered good enough to be sent out as new fixed types. The story of this improvement is a long one, interspersed with many disappointments. But the result now is success beyond contradiction. Northerners, people who live outside the cotton belt, do not realize just what a long staple cotton grown on the uplands means. Cotton is our principal export crop. It is the second most valuable crop grown in the United States, corn coming first. It is the principal crop of ten states, and in large areas of these states it is almost the only crop grown. The United States furnishes five-sixths of the cotton crop of the whole world, and while there are great areas, especially in Africa, that are adaptable to cotton, there is no prospect that the United States will be overtaken as a producer for many years to come. The world's consumption of cotton and the consequent demand are increasing steadily, so that there is little prospect of over-production. All these things are in our favor. Then comes the question of improving this great crop. Outsiders do not realize that an eighth of an inch on the length of the

It has been tedious work, and has been carried on systematically. "Score cards" such as are used in judging at stock shows are kept. The records of the individual plants are known, the shape and opening qualities of the boll, the date of maturing, and the length and firmness of the cotton fiber and the degree to which the parent plant may be depended upon to transmit its desirable qualities to its progeny. The work has been done in the open field and not in the carefully tended plots of the experiment stations. Thousands of plants have been destroyed each year, and only the best types kept. These have again been weeded out the following year, and only the best of the breed have been kept. The farmers who have been co-operating with the department in the work have been as a rule careful, enthusiastic and painstaking under the direction of the experts sent into the field by the department, and slowly but surely the length of the staple and other desirable qualities in the new cotton have increased, till the department now feels it has a new and fixed type that can be depended on to perpetuate its desirable qualities.

One thing that has been carefully observed is to keep growing the new types on the ground where they will be cultivated commercially. There are several new strains adapted to slightly different conditions of soil and climate. It has been found in the case of wheat, for example, that a strain may be improved in one locality, and that by moving it to new surroundings it shows little, if any, improvement over the local type. This error has been avoided with the new



A COTTON PLANT IMPROVED BY SELECTION.

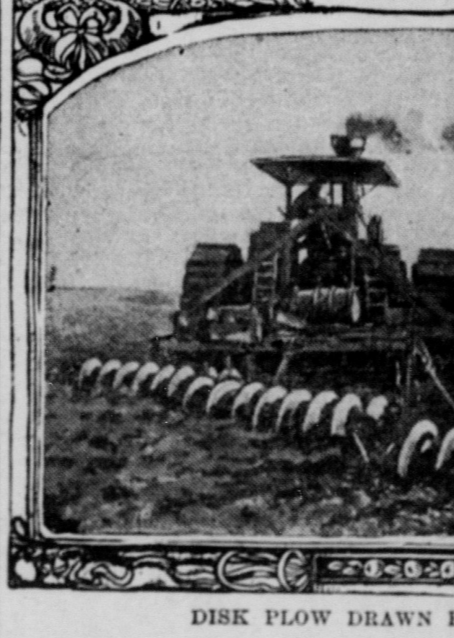
cotton, and the department not only knows the seed that will give best results, but the condition of soil and climate that are best suited to the requirements of each strain. IF FARMERS WILL HELP. The farmers at large can help greatly in keeping up the work that has been given a practical start by the department. There are simple methods of seed selection that will insure a steady improvement in each successive crop, and that will prevent the crops from deteriorating. The selection of seed takes a little care and intelligence, but it is not deeply abstruse work, and the department has reduced it to simple directions that are easy for any planter to follow. The "cotton belt," so called, in the United States is clearly defined. Cot-

and if the planters will co-operate with the department to even a reasonable degree the value of the whole cotton crop in the United States can be vastly enhanced without planting a single additional acre, and there will still be enough land available in the cotton belt to assure the United States of its supremacy in the cotton world for many years to come.

Cream Separator on the Farm.

It has been only a few years since the manufacturers of separators brought out hand machines with the definite purposes of making them popular and selling them in large numbers, says the Farmer's Wife in a well considered editorial. From that time to this they have gained friends, and now it is rare to hear anyone say anything against them, and when this does happen one may be sure it comes from some person who has been injured by their use, and this is never the man who provides.

The hand separator has so many advantages over the creamery separator that the whole creamery business is being revolutionized and re-



DISK PLOW DRAWN BY TRACTION ENGINE.

modeled because of these handy little machines. It is hard to find a place to begin to enumerate their advantages. In the item of traveling to the creamery there is a great saving. Where the dairy owner has one of these machines, he need not go to the creamery more than three times a week in the warm weather and twice in a week during the colder months.

When cream only instead of the whole milk is delivered to the creamery, the item of hauling is reduced to its lowest limits. Say ten cans of milk a day is the product of a given dairy. Where a hand separator is used, haul-



A COTTON PLANT IMPROVED BY SELECTION.

ing is reduced from taking the ten cans to the creamery every day to taking two cans of cream every other day, or three cans twice a week. The hand separator allows the dairyman to feed the skim milk to calves or pigs within a few minutes of the time it is drawn from the udder and before the natural animal heat leaves it. This saves warming the milk and allows its use when it is perfectly sweet and fresh. The hand separator saves hauling skim milk from the creamery to the farm, and it also saves the dairyman from the risk of getting milk from diseased cows to feed to his young stock. This is not a great risk, to be sure, but it is worth considering. Tubercular cows are frequently found in this country, and probably there is hardly a creamery among the patrons of which no cows suffering from this disease could be found. If the dairyman is sure of his own cows, the hand separator saves him from the risk of getting tubercular milk from the mixture in the milk vat at the creamery, from which he gets his skim milk when he delivers the whole milk.

The saving in work is a large item. Instead of ten cans to care for and keep clean and free from germs, there are only two. This saves labor and the investment of money in utensils. At the low price at which hand separators are sold, one will pay for itself time and again before it wears out, on the various items of economy mentioned above. There is another item. The hand separator is rapidly bringing about the centralization of the creamery industry. Cream gathered from hand separators is now transported as far as 200 miles to the central creamery, and here it is made into butter as much less cost than would be possible in the local creamery with a limited field in which to operate. This allows the creamery to pay a better price for butter fat and gives the dairyman more money from his cows.

The man who keeps as few as five cows will find it to his advantage to buy a hand separator, especially if he makes butter on the farm, for in such a case the saving in work is much greater than where a creamery takes the cream. It has occurred to the writer that in

UNITED STATES RECLAMATION.

Plowing by Co-Operative Traction Engines.

By C. J. Blanchard.

A million acres will be added to the cultivatable area of the country during the next three years, under the various government irrigation projects. Most of this acreage is raw land upon which the plow has never turned a furrow. Thousands of new settlers will be located there and for several years the principal work will be clearing, leveling, and plowing, to prepare the land to receive the water.

Over vast stretches the sage brush is the only vegetation. In other places the bunch grass makes a tough sod, unyielding and hard to break. The subjugation to agriculture of this new empire has attracted the attention of the manufacturers of implements and machinery. They see in this work a virgin field for the products of their factories. As most of the settlers going upon this land are not in affluent circumstances, and as feed for stock will be scarce and costly, any proposition which will eliminate the necessity for the purchase of horses, plows and forage will naturally prove interesting.

It has occurred to the writer that in

men than he in the service, but he stuck to them through thick and thin and they appreciated it." The frequency with which men state this as a reason for success is significant. It shows that the man of the hour is the faithful man, the man who makes his employers' interests his own and whose loyalty never wavers.

Associated more or less with all these requisites and overshadowing them all is hard work. "For this," said President James J. Hill of the Great Northern Railroad Company, "there is no substitute." You may be lacking in ability, in personality or some other way and still succeed; but if you have not the capacity for hard work you are doomed to failure.

Study the lives of great men and you will see in ninety-nine cases out of a hundred, their achievements are due to the possession of this capacity. William E. Corey, the president of the United States Steel Corporation, attributes his first success to "not being afraid to do \$2 worth of work for \$1." When a laborer he wheeled so much more iron than the other workmen that he was soon made foreman over them. The words "hard work" come nearer to holding the key to success than volumes of advice.

THE POSITION YOU WANT

may be among the thousands of good opportunities constantly listed in our twelve offices. If you wish to find out, simply write us your name, address, experience and salary desired and we will tell you frankly and without charge if any of the 20,000 employers we serve would be interested in you.

A Man of Your Qualifications
A copy of our Monthly Publication containing complete descriptions of
Over 1,000 High Grade Positions
for Salesmen, Executive, Clerical and Technical men at salaries of
\$1,000 to \$5,000 a year

is yours for the asking. If you have ability, you need our assistance and we need you. Write us to-day.

Hapgoods
THE NATIONAL ORGANIZATION OF BRAIN BROKERS
Suite 143, 305-309 Broadway, N. Y. City

Fat People

EXCESSIVE FAT OR OBESITY IS A DANGEROUS, PROGRESSIVE DISEASE THAT HASTENS DEATH.

IF ALL SUFFERERS FROM TOO MUCH FAT A TRIAL TREATMENT WILL BE SENT AS A FREE GIFT BY SIMPLY ASKING FOR IT.



I can reduce your weight 8 to 5 pounds a week. No starving, no exercising, no nauseating drugs nor sickening pills that ruin the stomach. I am a regular, practicing physician and a specialist in the successful reduction of superfluous fat. My perfected treatment quickly relieves you from that feeling of fullness and oppression, strengthens your heart, and enables you to breathe clear and fresh, and when you have reduced your flesh, to the desired weight, you will never become stout again. Your face and figure will be well shaped. Your skin will be clear and handsome and you will feel and look years younger. My treatment is recommended by eminent physicians and the highest medical authorities. Prominent physicians themselves are my patients. I absolutely guarantee satisfaction in every case. I send my new book on "Obesity—Its Cause and Cure" free to all interested; also a free trial treatment. Address confidentially, H. C. BRADFORD, M.D., 20 East 22d St., Dept. 424, New York City.

HOW TO HOLD A POSITION.

Courtesy, Promptness, Loyalty and Hard Work Are Keys to Success in Business.

By H. J. HAPGOOD, President of Hapgoods.

How to hold a position? Do just as little work as you possibly can; take no interest in the business; curse the injustice of your employers when you see younger men advanced over your head. By following these rules you may hold a position ten years, but the salary paid you and the responsibility placed upon you will be little if any greater than when you started. But by holding a position we mean something broader and better than this. We mean constantly increasing your employer's satisfaction, steadily developing higher ability and surely advancing to larger and greater responsibility.

My subject is then really "success in business," and this, like success of any kind, is "untaught and unteachable." There are, however, certain valuable hints to be gained by studying the careers of men who have succeeded. Although the paths by which these men have won success are widely different, there are certain features which stand out prominently in all of them. These I believe to be the essentials for business success—promptness, courtesy, loyalty, hard work.

Promptness is the key note in this age of haste. Opportunity waits for nobody, and the man who is always a little behind time is playing a losing game. "Always there with the goods" is one of the highest tributes that can be paid a modern business man. "Having the goods" is the first consideration, but this will avail little if you are not always there with them when wanted.

In this connection a good story is told of Philip D. Armour and a young man who had just begun work for him. When on the first morning the young man reached the office at 9 o'clock, he found his employer already there at work. The next morning at 8 o'clock it was the same. At last, determined for once to be there first, the new clerk was there at 7 o'clock. When he walked into the office Mr. Armour looked up from his desk and grimly inquired: "Young man, where do you spend your forenoons?"

Business hours are not usually as long as Mr. Armour made them, but whatever they are they are rigidly observed. Five or ten minutes in the morning, trivial as it may be itself, is a pretty sure indication of the degree of promptness you will show in more important matters.

"I know of no investment more certain to pay large dividends than courtesy," said a successful business man the other day, and he spoke the truth. In the nerve-racking, endless rush of affairs, there is nothing which leaves a stronger impression than a pleasant word or a kind act, especially if it be something most men overlook. Business courtesy is largely a matter of habit and is one of the habits we can afford to cultivate.

In the army and navy loyalty is an essential for success and it is no less so in the business world. Enthusiasm and loyalty go hand in hand; a man cannot be really interested in his work unless he has an employer to whom he is loyal. "There are many brighter

MALE HELP WANTED.

BOOKKEEPER: Man thoroughly experienced in double entry bookkeeping, who is competent to take charge of office. Salary \$1200. Write us to-day. Hapgoods, Suite 143, 305-309 Broadway, N. Y. City.

AGENTS, OUR NEW GOLD Window Sign Letters sent anything on the market. Big profits. Agents make \$100 to \$200 daily. Complete manuals sent free. Particulars free. Sullivan Co., 806 W. Van Buren St., Chicago, Ill.

WANTED: A Hundred Men and Women on different routes. Age 20 to 30 good sight and hearing. Experience unnecessary. First \$100 monthly, second \$120, third \$150. Brackets \$20 monthly, become conductors and earn \$100. Positions a waiting competent men. Send stamps for particulars. Name position preferred. Railway Association, Room 66, 221 Monroe Street, Brooklyn, N. Y.

WANTED: Amateur photographs suitable for art and advertising subjects. Mail print and price with postage for returns if not accepted, to The Geo. H. Lawrence Company, 274 Wabash Ave., Chicago, Ill.

WE WANT A HUSTLING AGENT in your town for the only automatic shaver, the Shaver-Cut Shaver, best shaver, best terms. Credit given. Orders filled same day received. Novelty Sales Co., 104 La Salle St., Chicago, Ill.

SALEMEN TO SELL the largest line of souvenier post cards in the country. Also large line of advertising cards. Excellent sales. Good Commission. Prompt settlement. Alfred Holzman, Publisher, 50 Dearborn St., Chicago, Ill.

MEN & BOYS WANTED to learn the Plumbing Trade. Complete course. 2 or 3 for sale? 22 months earn from \$2 to \$4 per day. With 6 months' experience, you may \$2000 a year. Heretofore, \$1000 to \$1500 per day. Catalogue sent free. Union Plumbing School, 161 W. 26th St., New York.

WE WANT MEN in every State to carry on business of great profit. Immediate proposition. Permanent men. State Maps sell themselves. Strictly commission basis. Scarborough Co., Box 509, Boston, Mass., or Indianapolis, Ind.

LADIES' APPAREL. SHIRT WAIST HOLDER EXTRAORDINARY—keeps all the bust around; no pins or hooks to tear; send \$2; with waist measurement over correct, and ask for white or black. Felix Corset Co., 121 Prince St., New York.

REAL ESTATE. 20 ACRES TRACTS CHOICEST fruit and farm land (on the Gulf Coast Highlands in Alabama) for \$2000 cash and 48 monthly payments of \$10 each (in 5 per cent. interest) \$250000 an acre a year. Heretofore, \$100000. Send for booklet. Heretofore, \$100000. 18 La Salle St., Chicago, Ill.

WANTED: WICHTA PROPERTY Lands in Southwest Kansas. What have you? Electric power buying and selling Kansas dirt. Choice 640 acres near Garden City, \$4000. Write E. L. Spencer, 115 S. Lawrence Ave., Wichita, Kansas.

CALIFORNIA COLONIZATION LANDS. Tracts of 200 to 2000 acres; low prices; easy terms level, rich, arid soil; abundance of water; best climate on earth. U. L. Duke Investment, 121 1/2 Mason Ridge, Los Angeles, Cal.

COUNTRY PROPERTY ONLY—EVERYWHERE—Farm, residence, hotel, business, etc. Electric Free to intending buyers. Owners willing to sell call or write at once. Phillips & Wells, 667 Tribune Building, N. Y. City.

BUSINESS EQUIPMENT. CALIGRAPH TYPEWRITER \$1000. Remington, Vest, Denmore & Jewett, \$150 each. Electric Commercial Graphophone \$1000. New super-arm disc phonograph, cheap. Edison Phonograph \$1000. O. Harker, 2 Park Pl., N. Y.

BOOK-KEEPERS—Keep out of trouble. Remove blots and incorrect entries without scratching. Our Radiator never fails. Write for literature. Send terms to Agents, H. A. Ink Radiator Co., 190 Washington Ave., New York.

MISCELLANEOUS. SOUVENIR POST CARDS OF NEW YORK CITY. Beautifully colored, no two alike, prominent views only. Send twenty-five cents in stamps or money order and I will mail six cards one card a day for six days. Foreign addresses not sent additional New York City. References: Mechanics & Traders Bank.

SELF FILLING "Hobbs" Fountain Pen. The best and most simple self filling Fountain Pen made clear and handsome. For sale at the trade now. Regular retail price \$2.00. For sale at any Stationer, Jeweler or Dealer, or of the manufacturer, Diamond Point Pen Co., 42 Beekman St., New York.

25 VISITING CARDS. Your name printed in script, old English, or Roman on 25 beautiful cards, only 10c name and address, list, 50 with name and address, 25c. Matteson, 20-40th St., Brooklyn, N. Y.

CYBER WRITING. Construct your own secret cypher by the perfect system. Invaluable for correspondence and diaries. Easy for those having keys. Others cannot understand. Full instructions \$1. J. W. Magrath, P. O. Box 224, New York.

18 MASS. HISTORICAL Post Cards, postpaid 25c. Newton Art Co., 202 Broadway, New York City.

CATSKILL MT. POST CARDS—30 assorted finest colored artistic views, 25 cents. from the Haunts of Rip Van Winkle. If you don't like 'em we refund the money. Also West Point, Hudson River Views, etc., etc., list free. Horton & Spooner, Box 28, Cornwall-on-Hudson, N. Y.

ATHLETIC OUTFITS—Base Ball uniforms & specialties. Send for sample book of uniform fashions and 100 Athletic Catalogue. Charges prepaid to any point in the U. S. Established 1898. William Head & Sons, Boston, Mass.

VALUABLE SCRAP PINK sheets, protected by our patented thin process. Finest quality. Ask dealer or send 25 cents to-day for gold plated sample. B. Ryppinski, 142 West 10th Street, New York.

PATENTS THAT PROTECT. Our 2 books for inventors mailed on receipt of 6 cents stamp. H. A. E. Lacey, Washington, D. C. Established 1868.

JUST PUBLISHED

A POPULAR EDITION OF

"THE COMING PEOPLE"

BY CHARLES F. DOLE

Author of "The American Citizen," "The Religion of a Gentleman," "The Spirit of Democracy," etc.

THIS remarkably interesting and stimulating book has been everywhere welcomed as a most valuable contribution to the thought of the present day.

THERE IS IN IT THE INSPIRATION OF HIGH AND PATRIOTIC IDEALS

It sheds a new light, bright, clear and convincing, in its common-sense optimism, upon the conditions that confront the nation to-day. Everyone who reads it will go forward with a clearer vision of the future of our country and with renewed courage and faith in the CAUSE OF THE PEOPLE.

Theodore C. Williams, late Master of the Hackley School, New York, in a San Francisco paper, declares that "it gives the profoundest thought with a transparent simplicity and charm that make it universally readable. It speaks as a friend to a friend. It has the rare eloquence of perfect ease and clearness."

The London Spectator calls it "a healthy and virile essay." The Bradford (England) Observer, speaking of its reality and reasonableness, says it is "a very revelation."

These are only a few from hundreds of eucommiums commending the book for its timeliness.

It should be read by all who feel the pressure of

THE TREMENDOUS SOCIAL QUESTIONS OF OUR TIME.

Price twenty-five cents (postage included). Remit by postal money order, express money order or postage stamps, to Publishers of

"THE COMING PEOPLE" 143 MAIN STREET WATERTOWN, MASS.



LOADING COTTON AT SAVANNAH.

fiber in a cotton boll means a cent a pound addition on the value of the crop. Now by careful breeding and selection the Department of Agriculture has produced cotton that runs from three-quarters of an inch to an inch and a quarter longer than the parent plants from which it was produced. This is not a freak growth, either. It is an improvement that has developed into a fixed type, and is no

ton is planted over the whole of it so that there is no large addition of range to the plant likely. It is true that the average within the belt could possibly be doubled, but that is not the thing the department is after. Good cotton land now yields 400 to 800 pounds to the acre. What the department would like to see this yield doubled in value and in quantity. The foundation for this increase is now firmly laid,