

# Oklahoma Farm Journal.

1911.

## ✿ ✿ ✿ Peanuts

The value of peanuts as a hay and food crop has never been appreciated. The peanut will grow on the larger portions of the uplands of the south. As a crop for varied uses nothing excels it. It can be made profitable when nuts are grown for market, and it has been found to produce more and cheaper pork than any other crop. When used as hay for horses or cattle the vines and nuts are pulled up and cured together. In this condition they are relished by all kinds of stock, and as they are highly nutritious they can be utilized in place of more expensive grains to a large extent.

Peanuts should not be planted until warm spring weather. Plant on a well-prepared soil, in rows three feet apart and twelve inches apart in the drill for the Spanish variety and a greater distance for larger varieties. The Spanish peanut is preferred for feeding purposes.

The peanut, like the other plants mentioned, is a soil improver, and every farmer should look with more favor on its place among the farm crops.—Dr. S. A. Knapp.

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#### Soy Beans

In some localities the soy beans has proved a most desirable hay and forage plant. The beans are very rich in protein and the stalk is equal to pea hay or alfalfa when properly cured. While not adapted to all classes of soils, as is the cowpea, soy beans should be given a trial on every farm.

Sow in rows three feet apart, one-half bushel of good seed per acre, cultivate well, and cut when the plants first begin to ripen or turn yellow. When intended for seed purposes the crop should be allowed to ripen a little longer than for hay.

The soy bean has been found valuable for hogs, where they are allowed to gather the crop from the field.—Dr. S. A. Knapp.

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## The Cowpea Crop

The cowpea is a part of the corn problem in the south and the plan generally adopted of broadcasting half a bushel to a bushel of seed to the acre at the time of the last working of the corn and covering with the cultivator has given good results.

The corn should be gathered as early as practicable and the stock turned in. Fortunate is the man who has tight fencing, so that the pigs, as well as the work stock and cattle, can have a chance at the cowpeas. On some of the poorer lands the corn rows may be made six feet apart and a row of peanuts planted between them; this will add to the value of the fall pasture when no cowpeas are planted. As soon as the crop of cowpeas has been fairly well grazed, break deep, setting the furrows on edge; harrow; sow to oats, vetch, winter barley, or rye, and turn this under in the spring. This plan will economically improve the soil and greatly increase the average crop production.

Where the season is too short to carry out the foregoing plan successfully it has been found that planting vetch and rye or crimson clover in the corn and turning them under in the spring rapidly builds

up the soil and is much more economical than the use of large quantities of commercial fertilizers. The general object is to keep the land occupied summer and winter, producing something of value for food or fertilizer and at the same time protecting the loose soils from washing or leaching by the heavy rains of winter and spring.

—Dr. S. A. Knapp.

## OKLAHOMA FARM

## The Corn Crop

The great American grain crop for men and stock upon the farm is corn. Corn, intelligently managed, will produce more food per acre than any other cereal, and it is generally one of the safest of crops, which is an important item, because where men and animals must be fed certainty of production stands among the first requisites. More corn brings into use the pastures and idle lands of the farm. It is the basis of a cheaper food supply for the masses. Therefore, the production of an abundant supply of corn is one of the essentials of good farming.

The southern farmer should grow enough corn for every possible need of the farm, and he can. It has been demonstrated thoroughly that with proper preparation and cultivation he can grow as much per acre as the best farmers in the corn growing states. At prevailing price it is cheaper to produce it than to buy it, even with 12 and 15 cent cotton. Furthermore, the best farming requires systematic rotation of crops on all lands. From this standpoint corn should be regarded as a renovating crop. It is a plant of wide adaptability and can be produced in nearly all portions of the United States. It is especially valuable from the fact that we not only get the corn, but can grow with it a heavy crop of cowpeas, which will give a supply of nitrogen and humus, two of the most valuable items in building up soils.

Corn is a tropical plant, and all other things being equal it should thrive better in the southern than in the northern states. This, however, is not the case. What is the reason? The main cause is the lack of suitable seed beds in the south.

Experiments have shown that, while it sends many of its roots three or four feet deep, the corn plant places the great body of its feeding roots from three to twelve inches below the surface where the soil is made loose enough by plowing or by frost to permit it. The roots send out in every direction an infinite number of hairlike growths, which absorb moisture and food. On soils properly prepared and in sections of fair rainfall the feeding ground for corn is usually from two to twelve inches below the surface. This is strictly true in the great corn belt of the northwest. In the south there has been too much shallow plowing. Breaking three or four inches is not deep enough to make a suitable feeding place for corn roots; on average land it furnishes neither sufficient food nor sufficient moisture for the plant to do its best. The trouble with shallow seed bed is that it is too wet under heavy rainfall and too dry in periods of drouth. To make its largest yield, corn requires not only a deep seed bed but a large amount of humus in the soil. Consequently most land requires some previous preparation—the plowing under of a green crop or the use of stable manure. The use of these is better preparation than to depend entirely upon commercial fertilizers. The land should also be well drained, because standing water is totally unsuited to the deep, penetrating roots of corn. Observe the following rules:

- (1) Select a well-drained piece of land, filled with vegetable matter.
- (2) Break (plow) in the fall to a depth of a foot or more, with some implement

that will not bring too much of the subsoil to the surface, and thoroughly pulverize. If this is done early enough, put in a winter cover crop of rye, oats, or barley, which should be turned under in the spring.

(3) Go over the land with a section harrow two or three times before planting and repeat immediately after planting and again after the corn is up, using the harrow at nearly right angles with the rows.

(4) Use the best seed, and especially such seed as has been tested in the climate of the field to be planted.

(5) Practice intensive, shallow cultivation.

The disk plow, the adjustable section harrow, and the weeder are valuable aids in producing the corn crop.

In selecting the seed it is not advisable that it should be selected from the crib or even from the ordinary field, if the best results are to be obtained. There should be a special plot for seed purposes, which must receive the best preparation of the seed bed and the best seed obtainable, with excellent cultivation and fertilization. Then, before the pollen has matured, all barren stalks and all weak and diseased stalks should be removed, leaving nothing but strong, vigorous, well-eared stalks in the field, because corn is fertilized from all the surrounding plants. Therefore, it is better to select a medium ear from a field where the average corn is excellent than a model ear from a field where most of the corn is inferior. Much depends also upon the vitality of the seed. To insure high vitality, corn must be gathered before the fall rains, put in a dry, well-ventilated place, and kept free from weevils. Corn is especially responsive to good treatment and careful selection. It is a crop easily improved and deteriorates as the result of bad management with corresponding rapidity.—Dr. S. A. Knapp.



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### KING CORN IS MARCHING SOUTHWARD; BOYS ARE CHANGING NATION'S CROPS

Will Corn Supplant Cotton as Most Valuable Southern Product?  
Crop Last Year Worth Five Hundred Million Dollars—Money  
in Southern Lands—Eighty Thousand Boy Corn  
Raisers—Story of an Economic Revolution.

Correspondence of The Times-Democrat  
Washington, May 26, 1911.

**T**HREE YEARS AGO I WAS A bankrupt. I had borrowed all the money I could on my farm and my credit was so bad at the stores that they would not trust me for a plug of tobacco. I could not pay my interest, and I had decided to give up the farm for the debt and go back to renting. Then one of Uncle Sam's demonstrators got me to plant corn and cotton, and to work it after the plans of the Agricultural Department. I thought him a fool, but I was desperate and I followed his rules. The result has been that the merchants are now chasing me for my custom. I have paid off my mortgages and I have money in the bank.

The man who spoke thus lives in Alabama.

#### A VOICE FROM GEORGIA

"I had always laughed at book farmers." It is a Georgia man who is speaking. "I was bred and bawn like Brer Rabbit, in a brier patch. I was brought up in the cotton fields and corn fields, and I thought I knew all about my land and what it would raise. I didn't want no white-shirted man from Washington coming round to tell

me how to manage my farm. I was raising from 100 to 200 pounds of cotton to the acre, and when my crop of corn was over fifteen bushels I thought I did well. Then one of these demonstrators of the Agricultural Department came along, and asked me to set out an acre and cultivate it his way. He told me I could double my crop, and that I might raise forty, fifty, sixty, and even eighty bushels of corn on the same ground where I had been raising twelve or fifteen. I laughed at him, and told him he did not know what he was talking about. 'This land,' said I, 'is just naturally poor, and it won't raise corn anyhow. I ain't going to waste my time for nothing.'

"Well, at that, Mary came out. Mary's my wife, and a mighty good wife she is, too. She leaned beside me over the fence and we talked to the agricultural man, who was out in the road. Mary begged me to try it, and the man begged. He was a powerful nice man, and so to oblige the two I said I would do it.

"I put out that corn. He made me take my old mule team and the heaviest plow and throw up the ground to a depth of ten inches. Then he made me harrow it. I never heard of harrowing for corn. We did this in the fall, and the next spring we plowed deep and harrowed and harrowed again. I got

the best seed I could find and cultivated the corn as he said.

"At the same time I concluded there might be something in it, and that if one acre was good, forty acres was better. So I took a field of forty acres away off behind some woods on another part of my farm, and cultivated it just the same way. My acre near the road, which the man watched and told me just how to handle, grew so that everybody stopped to look at it, and to make a long story short, we husked sixty bushels of shelled corn from that acre. When the corn was ripe the agricultural agent asked me whether I thought he had made good. I replied that he had, but that I had other corn on the place that was worth looking at. I then took him through the woods to my other forty acres, which was just as fine as that on the road. You'd ought to see him look. Well, I got 2000 bushels off of that forty acres, and I now do all my farming that way."

#### WHAT A COLORED MAN DID.

My next human document comes from a colored man. He writes from Mississippi to the head of the farmers' cooperative demonstration work in the South. After years of poverty and despair, he has started raising cotton under government supervision. The spelling of the letter is as it is written. The penmanship I cannot reproduce.

"A. D. 7, 16, '10.

"Sir—I rite you a few lines in the gards of farming agricultur. I do sey that your advice has Ben Folard, and your direcksion have Ben o Baid, an I find that i am successful in Life. Cey, Mr. Knapp, I do know that there is goode men as you an as fair as you, But o that keen eye ov yourse that watches ever crook in farming, that can tell ever men whichever way to Gro



THE CHAMPION CORN RAISERS OF ELEVEN SOUTHERN STATES.

ary Wilson and officers of the Farm Demonstration Work in the rear. These boys had free trips to Washington, where this photo was taken.

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to be successful in life. On last year I followed your advice, an also on yer Befor last. On 1908 i made 14 Bails of cotton, and in 1909 17 Bails. I startid with one mule an now I owe 3 head ov the great worthies. Thanks to you for your advice a Long that Line, an Great success in your occupation to you.

"Sey Mr. Knapp I am a culered man. Live near Graysport, Mississippi. Corn a plenty, also make a plenty of Sweet Potatoes, but I need your advice a Bout them. Will close. Yourse,

"WM. WASHINGTON."

The above bits of evidence are mere straws to show how the wind blows. Uncle Sam has a mighty stack of them in his Department of Agriculture, and his mail is loaded with similar letters each day. He is teaching the South how to raise cotton and corn, and is creating a revolution which has already added hundreds of millions to our national wealth. He has now something like 90,000 men and almost an equal number of boys who are raising corn under government direction, and the result is the erection of a new industrial empire.

Until within the last decade cotton was the money king of the South. It was the cash crop and it paid all the bills. The farmers imported the feed for their stock, and the corn lands of the North furnished the hog and the hominy. Then the boll weevil came in and with its snout-like nose began to eat into King Cotton, even as the worms ate into King Herod the Great, and King Cotton seemed like to give up the ghost. Uncle Sam, patriarch, saw the wrinkles of ruin springing up on the faces of his multitudinous children throughout the South, and he sent his legions of angels in the form of the agricultural scientists to fight down the weevil, and planned the raising of crops which should add to or take the place of the cotton. The chief crop was corn, and as result the people of the South have sprung from being the poorest to potentially the richest of Uncle Sam's children. The growth has been almost all accomplished in the space of four or five years and it means hundreds of millions of dollars.

**\$500,000,000 CROP.**

The corn crop of the South during 1910 was one-third of that of the whole country. It was nearly 1,000,000,000 bushels, and at the low price of fifty cents a bushel it was worth \$500,000,000. It exceeded by many millions the output of the gold mines of all the world for that year, and not counting the value of the fodder was more than half the value of the cotton, including both lint and seed. The increase of the corn crop of nine Southern States over that of 1909 was more than 158,000,000 bushels, or a value of nearly \$80,000,000, and this increase is 45 per cent of the total increase in corn for the whole United States during that year. These States were Virginia, North Carolina, South Carolina, Georgia, Alabama, Mississippi, Louisiana, Arkansas and Texas. The total crop, as I have said, was almost 1,000,000,000 bushels.

One billion bushels! As a whole the figures stagger the mind, but load the corn upon two-horse wagons at a ton to the load and let each team take a space of forty feet on the roadway and the train of teams would reach almost eight times around the globe at the equator, the first wagon being nearly 200,000 miles distant by the time the last wagon was loaded.

Does it not look as though corn might become king of the South?  
**TWO HUNDRED THOUSAND FARMERS AT SCHOOL.**

But the work is just at its beginning. It was originated and organized by the

late Dr. Knapp only about five years ago. But there are already 200,000 farms scattered over the Southern States on which experiments are being made by boys and men as to new ways of corn culture and each of these is a school for the community where it lies. The government has 550 traveling agents, who supervise the work, and each of these has a large number of demonstrators or teachers who visit the farmers every week or so and instruct them just how to go about raising the crop. Where possible they have these experimental plantations set out close to the roads so that the people can see the results as they go by on the way to or from town. They have organized farm clubs in several thousand communities and have caused the institution of hundreds of county fairs in the interest of improved agriculture.

Not only the government, but the States, counties and towns are interested in this movement and are giving to it large sums of money. The appropriation of Congress last year was \$250,000, but to this \$113,000 was added from the Rockefeller fund, and many thousands were given by the business organizations and the bankers, merchants and wealthy men of the various communities. In addition to the large number of farms or experimental patches on farms, under the direct charge of the government agents and their demonstrators, there are more than 70,000 farmers who are receiving instruction from the Agricultural Department by letter and are reporting

the results. This makes a mighty correspondence school which is increasing each week. The work is not confined to corn alone, but to the proper cultivation of cotton, oats, cow peas and hay.

I wish I could give you some idea of the results that have already been accomplished. I have spent the week at the Agricultural Department talking with the agents of the farmers' co-operative demonstration work who have just come in from the fields and who are handling this enormous mass of correspondence. I have also talked with Mr. Knapp, who, with his father, the late Dr. S. A. Knapp, has special charge of this work.

They tell stories of hundreds of farmers who within the past three or four years, through proper farming, have climbed over the hill of difficulty into easy street, and of a large number who are making big sums of money. One man, for instance, a Mr. T. O. Sandy, bought a tract of land about three years ago south of Richmond in Nottoway county, Va. He paid \$4 an acre for it and began to raise hay after the rules laid down by the department. At the end of two years he was getting five tons of hay per acre from that four-dollar land and was selling the hay at \$25 a ton. In other words, his gross income for land that cost him \$4



**ONE HUNDRED AND THIRTY-THREE BUSHEL PER ACRE,**  
Each of 100 boys raised more than this last year. Joe Eggleston of Virginia.

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per acre was \$125 per acre. That man is still farming.

One of Uncle Sam's clerks has bought 1200 acres within twenty-five miles of the national capital, and he is putting it out in corn after government methods. The land cost him \$10 per acre, and it is close to the railroad, within easy access of Washington, Baltimore, Philadelphia and New York. The scientists of the department tell me that the land needs only cultivation and the right crops to make it produce as much corn as the best soil of Illinois, Kansas or Iowa. It is within a half hour's ride by rail of Washington city, and it was bought at a much lower price than that

of the second-class lands of Texas or other States beyond the Mississippi.

Another farmer was induced to cultivate five-eighths of an acre of cotton after government methods. His plantation was then producing something like 200 pounds of lint to the acre. He be-

gan his experiment in 1908, at which time he could not afford to send his children to school. He succeeded so well that in 1909 he planted his whole plantation that way and raised 1200 pounds of seed cotton per acre. He also

tried corn, raising as much as 150 bushels on a single acre of ground. It is now two years and that man has paid all his debts and has money in the bank. His boys are in the high school and his daughter has gone to college.

**EIGHTY THOUSAND BOY CORN RAISERS.**

One of the most important features of this revolution is the work being done by the boys. At the present writing the government has on its rolls eighty thousand Southern boys, each of whom is now cultivating one acre of corn under government directions. These boys are in seven or eight hundred different

counties, covering all the States of the South.

They belong to corn clubs which have been organized in various localities and are working for prizes offered by the bankers, merchants, Boards of Trade, county clubs and public-spirited individuals of their neighborhoods. They are also working for the prize given to the best boy corn raiser of their respective States, consisting of a diploma from the Department of Agriculture and a free trip to Washington, where they may spend a week, and see the President and Congress and the interesting features of our national capital. The prizes given to such boys by the localities last year

amounted to \$40,000 and more. They will probably be twice that this year. They consist of cash, farm implements, ponies, pigs, bicycles, watches, guns, books and everything which will tend to gladden a boy's heart and make him work.

The number of Southern boys competing in 1910 was, according to the government rolls, 43,225. Each of these planted an acre of corn and worked it under government directions, producing crops which staggered their respective communities. In Mississippi, where the average corn crop last year was less than twenty bushels per acre, forty-eight of these boys raised on the average ninety-two bushels per acre. In one county of South Carolina, which State has an average per acre of less than nineteen bushels, twenty boys produced 1700 bushels of corn on twenty

acres, and 140 boys averaged sixty-two bushels. The Governors of the different Southern States are now giving diplomas of honor to all boy corn raisers who can show a crop of seventy-five bushels per acre, and at the national corn show at Columbus last fall an automobile was presented to the boy who had raised the most and best corn on one acre at the lowest cost.

**HOW A BOY WON AN AUTOMOBILE.**

The automobile was awarded to Stephen G. Henry, who produced 180.3 bushels of corn on one acre at a cost of 13.6 cents per bushel. Stephens comes from Melrose, La. He is the youngest of five boys of a family, and he has been raising corn for three years by the government directions. He has won a number of premiums. And last year he received a gold watch from the Governor and also a pig, two sheep, \$25 in gold and a diploma. The club to which he belongs contains 200 members, and Stephen's brother is also a prize winner.

I give you in brief the way Stephen raised his last crop of corn. He broke the ground in the fall, plowing it eight inches deep. He turned the soil again in March, and went over it with plow and harrow until it was thoroughly fine. He put on two tons of stable manure at that time and then planted the corn. This was on the 17th of March. The seed sprouted all right, but a part of the crop froze, and he had to replant May 20. After that the corn was cultivated again and again with a hoe and cultivator, all the suckers being pulled from the hills. When he laid the corn by, he planted cow peas between the rows



**JERRY MOORE RAISED 228 BUSHELS AND 3 PECKS ON ONE ACRE.** This is the yield record of the world for twenty years and second highest yield in history. This picture shows Jerry and his corn.

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to increase the fertility of the land for the next year. The corn was harvested, shelled and weighed, and at fifty-six pounds to the bushel it measured 138.8 bushels.

#### THE QUESTION OF COST.

But this yield would not have given Stephen the prize. There were many boys who raised more. There were 100 who belonged to the corn clubs of the South who made an average of 133.7 bushels per acre in 1910. There were five who grew more than 200 bushels and quite a number who grew 150.

No, Stephen got the prize because he raised the most corn at the lowest cost. Jerry Moore's 228 bushels cost him 43 cents, and Morris Olgers, of Virginia, raised 168 bushels at 40 cents. Of the National prize winners who came to Washington, Ira Smith, of Arkansas, raised 119 bushels at a cost of 8 cents per bushel, while Floyd Gayer, of Oklahoma, produced 95 bushels on an acre at the same cost.

Stephen, like every other boy of these whole 80,000 who are now working, had to keep account of every cent spent on his acre. He had to charge himself \$5 for the rent of the land, and put down 10 cents per hour for every hour he or any other boy worked upon it. He

charged himself 5 cents per hour for the time of each horse and \$2 for each two-horse load of stable manure, as well as the market prices for any commercial fertilizers used. By adding up his accounts and dividing by the number of bushels of shelled corn in

the crop, he got the exact cost per bushel to raise it.

The boys' corn clubs of the South have almost doubled this year, and they will probably double again the year following. The boys belonging

to them are from ten to eighteen years old, and some of the big prize winners are only twelve. That is the age of Joe Stone, of Georgia, who was so small that his father came with him during his free trip to Washington. Nevertheless, he produced more than 102 bushels of corn on an acre.

The rules of this work provide that each boy must plant his own crop and do his own work. He must present the results to the county superintendent of education. He must gather the corn and weigh it, and the land and corn must be carefully measured in the presence of at least two disinterested witnesses, who have to sign a certificate.

The boys must study the instructions given them and follow directions. Each has to write the history of his crop and how he made it, and the prizes are awarded not only on the number of bushels produced, but on the profit and character of the corn. In making the choice the yield per acre counts 30 per cent, the best ears 20 per cent, the best history of the crop 20 per cent, and the highest profit 30 per cent. When it is remembered that all these things are tested by the heads of the schools and a committee of farm experts, some idea may be had of the educational and agricultural value of this mighty work of Uncle Sam, patriarch.

FRANK G. CARPENTER.

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THE SOUTH HAS 80,000 BOY CORN RAISERS.  
Spring meeting of Boys' Corn Club, Gibson County, Tenn.

*The Progressive Farmer*

*Feb. 9, 1918.*

**Do You Know This Kind of a Slacker?**

**I**N A certain county in the South we know of a man prominent in local politics who publicly derides the efforts of the farm demonstration agent in his county, at the same time belittling the efforts of the demonstration and extension workers as a class. Nevertheless this critic poses as a patriot, and insists that he is heart and soul behind Uncle Sam in the battle against Kaiserism.

We know quite well that there are some inefficient county agents, men who are not doing their jobs as they should be done, just as in every calling or profession there are inefficient men. But because the agent in one county may not be efficient is no reason at all for condemning demonstration and extension work as a whole. To do so is no less unfair than to condemn preachers, doctors or farmers as a class because an occasional preacher, doctor or farmer may be found who is inefficient. Any thinking, observing man knows that few if any agencies have been of greater service to Southern agriculture than the demonstration work founded by Dr. S. A. Knapp.

One way of showing our patriotism these days is by loyally supporting the Government's efforts. The demonstration workers just now are making every effort to help the agricultural South maintain and even increase crop production, and the man who hinders their efforts is guilty of an unpatriotic act. Before we offer criticism, let us be sure it is constructive, rather than destructive.

## THE PRAIRIE FARMER

growing

February 1, 1912.

### Testimonial to Dr. Knapp

The boy corn growers of the United States and the farmers of the south are anxious to raise some sort of memorial to Dr. S. A. Knapp who originated the corn club scheme. An organization has been formed throughout the south and it is expected that \$20,000 will be raised in dimes, nickels and quarters. Up to the present time it has not been determined what form the memorial will take, but Dr. Knapp himself had a strong prejudice against bronze and stone monuments, so the chances are the memorial will be something in line with this work.

One plan that has been discussed is to start a seed farm where plant breeding may be carried on and good seed raised there and distributed to the corn club boys as a part of their annual prizes.

Probably, however, the greatest testimonial of the value of Dr. Knapp's work will remain in the shape of greater prosperity to the farmer through increased production which comes to those who have taken to themselves the lessons learned through the farm demonstration work fostered by the doctor.

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Farmers' Union Lun - 1912 -

## Knapp Agricultural Day

Oct. 23, 1912

The 148,000 teachers and the 7,000,000 pupils of the South are being urged by their educational and agricultural leaders to assemble 3,000,000 farmers, their families and friends, in the 89,000 school houses on November 27th for an hour, in order to survey and review their agricultural resources and achievements, and to express their appreciation of the services of one of their great benefactors. Agriculture is worthy of this consideration, for the farmers of the nation have this year produced ten billion dollars worth of crops to feed and clothe nearly 100,000,000 people here, with a surplus for other nations.

Knapp Agricultural Day is the official designation. The South wishes to honor the memory of Dr. S. A. Knapp as the founder of the Demonstration Work and the Boys' and Girls' Clubs. This is fitting, because 100,000 demonstrators are making larger crops on their farms and corn club boys are attracting world-wide attention by growing more than 225 bushels on one acre at low cost. The indications are that several of the 75,000 boys will this year break all records. It is fitting, because 25,000 girls, in the harvest season, are filling pantries with wholesome food and selling the surplus. It is a duty, because Dr. Knapp taught a new method in agriculture and the lessons must be more widely impressed and unfailingly transmitted. Representatives of England, Russia, Brazil, South Africa, Siam and Argentina have come to learn them. It is high time for American schools to take the lead in these ideas.

There is to be a Knapp school and a Knapp farm near Nashville and in connection with Peabody College. When \$150,000 is collected for the farm and school building, \$250,000 will be added for endowment of the school of country life by the general education board. No other such institution exists. It will start out with the purpose of reaching and helping every school and farm in the South.

This institution will be a laboratory, a clearing house, and an assembling place for agricultural and educational workers. Eventually it will have demonstration schools in each State and county teaching its lessons. It will be a working, living memorial, but in a conspicuous place will also appear a life-sized statue of Dr. Knapp.

What vast possibilities loom up, if the people of the whole South will annually contemplate agricultural matters for one hour! The State and county superintendents of education are taking the lead in this movement. It will be a worthy tribute to a worthy man. The name of each contributor will be kept as a grateful record.

### Suggested Program for Knapp Agricultural Day.

November 27th, or the nearest Friday to that date.

1. State song or America, by school.
2. How the Bible teaches agriculture, by an invited minister.
3. What great poets have sung about the farm, selections by class of pupils.
4. How Dr. Knapp prepared himself for great service, by a boy.
5. What Dr. Knapp taught, quotations by class of pupils.
6. How the Demonstration Work was organized and conducted, by a leading citizen.
7. How Dr. Knapp's work helped this community, this State, and the South, by three boys.
8. How I grew my crop, by a Corn Club boy.
9. What I did with my vegetables and fruits, by three girls.
10. The best farm crops for this community, and why, by several pupils. How can these crop products be displayed today, school exhibit.
11. What can we do to express our appreciation of Dr. Knapp's great work. Collecting contributions and pledges.
12. Song: Bringing in the Sheaves, by all.

## WHAT DR. KNAPP DID FOR SOUTHERN FARMERS.

He Waked Them Up to the Fact That Profits Can Be Increased 100 to 800 Per Cent by (1) More Horses, (2) Better Machinery, and (3) More Scientific Knowledge—Lessons of His Life.

From a Speech by Clarence Poe at the Southern Commercial Congress.

**T**HE real test of all human worth or greatness comes out in Kipling's "McAndrew's Hymn," when the old Scotch engineer, conscious of the futility of all else, measured by the Almighty's standards, speaks with humble dignity of the one thing worth while in human life—



DR. KNAPP.

"I am o' service to my kind; ye wadna blame the tho't?" This is the one and only criterion of greatness. And judged by this standard, my friends, no greater man than Dr. Seaman A. Knapp, organizer and director of the Farmers' Co-operative Demonstration Work, has appeared upon the horizon of our Southern life since Henry Grady.

### Our Real Debt to Dr. Knapp.

I make this statement advisedly and with the full knowledge that some critics would reject it. They would remind us that Dr. Knapp discovered no new agricultural truth, wrested no valuable secret from chemical laboratories, wrought out no new doctrines from long experiment or investigation. But while I grant all this, and grant further that Dr. Knapp perhaps had himself no such fund of agricultural knowledge as some of our college professors, I still maintain that Dr. Knapp made one of the greatest of original contributions to agricultural science in that he discovered not simply a new agricultural truth, but a new way of disseminating all the vast treasures of truth which others had developed. Grant that in learning from him the small farmer heard only what other men had been saying for 40 years; the point is that they had been crying in the wilderness of ineffectuality while Dr. Knapp actually reached the ear and the heart of the man behind the plow. He actually carried the message to Garcia. If the agricultural principles he taught were not new, it was new to think of going to the ignorant farmer and "demonstrating" their practicability and potency before his very eyes. And so it is the glory of Dr. Knapp not that he added another dry agricultural principle to human knowledge, but that for a great body of people, under the power of his organization, all formerly dry agricultural principles became live and potent as did

the dry bones in Ezekiel's Valley when the spirit of the Lord brought bone to bone and clothed them with miraculous flesh and sinew.

### Our Two-fold Problem.

The problem of agricultural up-building in the South, from an economic standpoint, is and has been, two-fold. The idea was very well expressed by my friend, Mr. E. E. Miller, the other day:

"The farmer is not only going to do better work, he is going to get more for it. He is not only going to get more out of his dealings with the soil, he is going to get more out of his dealings with other men."

This is but another expression of the dual purpose of the Farmers' Union: "To educate the agricultural classes in scientific farming," and also in scientific buying, selling and distribution. Dr. Knapp was interested in the second part of this program, but he saw that the first part was where he could get biggest results. He saw that even with present methods of buying, selling and distribution, the Southern farmer's profits might be doubled, and far more than doubled, by better methods of farming, and he set himself to bring this about. That the first thing for us to do is to earn as much as we can under existing conditions and then improve the conditions as fast as we can, was his wise philosophy.

He recognized the truth of Adam Smith's saying that since the downfall of the Roman Empire the policy of great nations "has been more favorable to arts, manufactures and commerce, the industry of towns, than to agriculture, the industry of the country." And he was intense in his opposition to unfair tariffs and extortionate middlemen's charges, and other methods by means of which the rich have brought the spoils of the poor into their houses.

### We Can Double Our Profits Even Under Present Conditions.

Nevertheless, Dr. Knapp saw that even under existing conditions the profits of the Southern farmer might be increased from 100 per cent to 800 per cent. He knew that the farmer in the North or West is under the same government, the same general marketing and economic conditions,

as the farmer in the South, and yet as I pointed out in an address at the first session of this Southern Commercial Congress in Washington, our poor farming methods had cost us so heavily that the average South-Atlantic-States farmer then earned \$480 a year as compared with \$984 for the average farmer in the North Atlantic States, and our average farmer in the South Central States then earned only \$536 as compared with \$1,074 for the average farmer in the North Central States.

In other words, Dr. Knapp understood what I then insisted upon—that even under existing conditions the average Southern farmer could earn \$500 more a year by better methods in farming. He saw that we were using crude tools whereas the Western farmers used good ones; that we were using expensive human labor whereas the Western farmer used cheap horse-power; that our soils were becoming depleted through the one-crop system while the Western farmer was maintaining fertility through diversification and stock raising; that we were getting only one profit—the profit of growing crops—while the Western stockman-farmer was getting two profits—one from growing the crop and one from feeding it.

### Running Our Brain With One-Horse Power.

But most important of all, Dr. Knapp saw that the average Southern farmer was running his brain with one-horse power whereas the Western farmer was running his with two and three-horse power. Statistics show that farm workers in three typical South Central States average less than one horse, cultivate only 16 acres per capita, earning \$189 a year; whereas the farm workers in three typical North Central States average between three and four horses per capita and cultivate 63 acres apiece, averaging \$663 a year. Dr. Knapp put the whole matter in a nut shell when he declared in his great Lexington speech six years ago: "Where the South Carolina farmer uses one mule and one man to plow, accomplishing less than an acre per day from three to four inches deep, the Iowa farmer uses at least three horses, and plows four acres per day

# What Dr. Knapp did for Southern Farmers.

## II

six to eight inches deep." And in the same speech, let me say just here, Dr. Knapp gave the whole platform of Southern rural regeneration so far as farm work was concerned, when he declared:

"I estimate that there is a possible 800 per cent increase in the productive power of the farm laborer, in the average Southern State, and I distribute the gain as follows:

"Three hundred per cent to the use of more and better mules and farm machinery.

"Two hundred per cent to the production of more and better stock.

"One hundred and fifty per cent to a rotation of crops and better tillage.

"Fifty per cent to better drainage.

"Fifty per cent to seed of higher vitality, thoroughbred and carefully selected, and—

"Fifty per cent to the abundant use of legumes and the use of more economic plants for feeding stock."

Dr. Knapp's great heart was touched by this vision of the ineffectual labor of the Southern farmer; of women toil-bent for whom better methods would bring greater freedom and happiness; of rural children with a school term of only 95 days in North Carolina or 93 days in Arkansas as compared with 156 days in Utah, 170 in Iowa, or 182 in California.

### Awakened, Scientific Farmers Our Only Hope.

He saw, as he said, that "agriculture in most sections consists simply of a series of notions inherited from Adam," and his great heart went aflame with a desire to help the people get the richer life involved in that \$500 a year more that the Southern farmer might earn by better methods of farming—even under the faulty methods of distribution which Secretary Wilson says leave the farmers only 50 per cent of the price that the consumer pays for farm products. And if we get the farmer waked up enough to make the most of his soil in the matter of production, he will get waked up enough to make the most of his power in dealing with the world of commerce and finance.

It is the progressive, thrifty, scientific farmer who will win justice for agriculture if it is ever won—not the hopeless, unprogressive "man with the hoe."

Dr. Knapp knew, as every right-thinking man must know, that the surest way to get the reforms in our banking laws for which he contended, and destroy the tariff evils, which he condemned, is first to give the farmers greater independence through better methods of farming. "You must keep a man's nose away from the grindstone," he said, "for if it is constantly at the grindstone he can't see anything else; he can't be elevated."

### More Money As An Aid to Better Living.

This is the doctrine he was constantly preaching; that better schools and better roads and painted houses and better vehicles and more home conveniences, all cost money; and that the first and fundamental thing in rural betterment is to help the farmer make more money. He did not want money for money's sake, mind you. Money with him was ever only a means to an end—a better and happier people. Indeed I like to think that the real secret of Dr. Knapp's mighty influence, was that he always, in every situation, reduced this problem of rural development to its warm, throbbing human terms.

I, myself, grew up on a Southern farm in the darkest period of South-

ern agriculture—when cotton was five cents a pound, and science had brought no life or color into the unrelieved drudgery of farm work, and the menace of the mortgage on the little home stalked like a haunting specter through the thoughts and dreams of millions of Southern farmer folk.

It was under circumstances such as these that Dr. Knapp came into the South, and it was from a vast and genuine sympathy for the "wayside children of poverty"—for he had known poverty himself—that he began his great mission. Heartened and inspired therefore at all times by the secret strength that men find in service to others, he wrought out his great task, "making the smile on other lips his own, living upon the light in others' eyes."

### A Burning Sympathy for the Poor.

So it was in that great speech in Lexington, Ky., from which I have already quoted. For a time he held his audience spellbound as he pointed out the significance of agricultural development to our National prestige, but then his heart betrayed him away from statistics and economics into this eloquent human confession:

"But to-day I am not viewing this campaign for increased production in the country from the National standpoint. I am thinking of the people, of rose-covered cottages in the country, of the strong, glad father and his contented, cheerful wife, of the whistling boy and the dancing girl, with school-books under their arms, so that knowledge may soak into them as they go. I am thinking of the orchards and the vineyards, of the flocks and the herds, of the waving woodlands, of the hills carpeted with luxuriant verdure, and the valleys inviting to the golden harvest."

"What can bring these transformations to the South?" he asked. And his answer was, "Greater earning capacity for the people." Something of the burning sympathy for the poor which flames through the writings of the Old Testament prophets was in Dr. Knapp's heart, and he concluded this Lexington speech with this prophetic utterance:

"The revolution must continue until the problems of poverty are solved, the measure of human happiness full, and the reproach that has hung over our rural domain, by reason of unthrift, ignorance and poverty shall be wiped out."

### Dr. Knapp's Great Hope.

And yet, my friends, my fellow Southerners, my task to-day, as I conceive it, is far from being one of empty eulogy. Rather I would make it an appeal to strive on to finish the task that we are in; to carry forward the great work which our heroic leader left uncompleted.

Let us see then in conclusion just what was the ideal toward which he was striving; just what was the vision he was seeking to realize. As I have already suggested, he was not content merely to increase the aggregate profits of Southern agriculture—"I do not glory in the wealth of a few," he said, "but rejoice in the general distribution of wealth and prosperity for the common people." The problem to him was ever a human one. To make a richer life for the farm folk; to make farm homes more joyous and wholesome; to make happier, stronger and better farm men and women—this was his dream and his vision, often and often expressed.

Put in a single sentence, Dr. Knapp's one great aim, his dominant ideal, was to make the South a vast democracy of thrifty, home-owning farmers, every man sitting under his

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own vine and fig tree, to develop in the South the ideal conditions for a mighty race of high-minded, stalwart, courageous people. I wish every farmer in the land could get and read his bulletin, "The Cause of Southern Rural Conditions and the Small Farm As An Important Remedy." To break up our great plantations into smaller holdings and to encourage and help every farmer to own his own home; this he regarded as the most important task ahead of the leaders of Southern agriculture. To use his own language:

"A prosperous, intelligent, and contented rural population is essential to our National perpetuity. The world's experience has shown that the best way to secure this is to encourage the division of all the lands into small farms, each owned and operated by one family."

#### Tax Small Holdings Less, Large Holdings More.

My own conviction, ladies and gentlemen, is that in this statement Mr. Knapp showed the vision of a prophet and a seer. It will be well indeed for the South if we do not come too late to listen to the warning of England two centuries ago against the hastening ills to which any land is subject "where wealth accumulates and men decay," and where princes and lords flourish at the expense of a bold peasantry.

Even now the duty of the hour as I conceive it, is to lighten the burdens of the small home-owner. The methods I suggest are new in the South, I know, but I do not hesitate to say that I believe we must lighten the taxes on the poor man and the small home-owner and land holder, and increase the taxes on others—principally by levying heavy graduated taxes on inheritances of \$5,000 or over, and a Lloyd-George graduated tax on the unearned increment in urban or rural land values, completely exempting from the latter provision all, say who own less than \$1,000 worth of land.

We must tax small holdings less, great holdings more; the gains of thrift and industry less, the gains of chance or inheritance more.

Into our State laws here in the South as in our National laws at Washington we must write the determination of the people that the birth-right of every man to the liberty and happiness of home-owning shall be properly safeguarded, and that the weak shall not be forced to bear the burdens of the strong, or the many impoverished that a few may be enriched.

A great democracy of thrifty, prosperous, home-owning small farmers is the hope of the South and should be the goal of all our striving. Vast areas held for speculative purposes or bought by corporations merely for financial profit and cultivated by men who are nothing more than factory machines to their owners—all such holdings are a menace to the progress and prosperity of our section, as indeed are all great plantations where a backward tenantry is exploited, when by cutting them up, thrifty and progressive farmers and home owners would come in and give strength and power to the State.

#### How Western Immigration Would Help.

With the same idea of promoting this puissant democracy of home-owners—the strength of any commonwealth—we need to encourage the coming of thrifty Northern and Western small farmers into our Southern country. We need them, for one thing, to reduce our too-burdensome proportion of negro population. I have no ill will against our negroes, but they themselves will be helped as will every worthy interest in every Southern State, by increasing the percentage of our white population.

Moreover, everybody knows that the direct drawback to rural life is its isolation. If the South were today a great democracy of home-owning, 80-acre farmers, and our present number of negroes not increased, the problem of an adequate and well-rounded social life on the farm would be immediately solved; the proportion of negroes would be too small to be serious; our larger population would support the finest school systems in the world; our greater number of tax payers would enable us to have magnificent roads, good all the year round; the larger population would provide adequate support for the best teachers and ministers and professional men; rural telephones, lyceums, trolley lines, the transportation of school children, the development of social centers, all would follow as naturally as the day the night; the prosperity of our towns, and of every worthy industry in them would be doubled, and new spirit and vastly increased vigor would be found for every manufacturing and commercial enterprise known to our people.

#### The Supreme Task Ahead of Us.

This is the supreme task ahead of us. It is the problem for our statesmen, our editors, our agricultural leaders, our men of vision in every profession and calling. If I understood the spirit of Dr. Knapp—and I think I did—it is the task above all others to which he would like to have us dedicate ourselves and all our future lives as we leave the memorial meeting planned in honor of his memory. And so from his place in

"The choir invisible  
Of those immortal dead who live  
again

In minds made better by their presence—"

he would look down on this occasion as one who having seen of the travail of his soul, is satisfied.

# The Fundamental Principles of Good Farming

By S. A. KNAPP

These principles are as follows:

1. Prepare a deep and thoroughly pulverized seed bed, well drained; break in the fall to a depth of 8, 10 or 12 inches, according to soil, with implements that will not bring too much of the subsoil to the surface. (The foregoing depths should be reached gradually if the field is broken with an ordinary turning plow. If a disk plow is used, it is safe to break to the above depths at once.)
2. Use seed of the best variety, intelligently selected and carefully selected and carefully stored.
3. In cultivated crops give the rows and the plants in the rows a space suited to the plant, the soil and the climate.
4. Use intensive tillage during the growing period of the crops.
5. Secure a high content of humus in the soil by the use of legumes, barnyard manure, farm refuse and commercial fertilizers.
6. Carry out a systematic crop rotation with a winter cover crop on southern farms.
7. Accomplish more work in a day by using more horse power and better implements.
8. Increase the farm stock to the extent of utilizing all the waste products and idle lands of the farm.
9. Produce all the food required for the men and animals on the farm.
10. Keep an account of each farm product, in order to know from which the gain or loss arises.

## Preparation for the Seed Bed

Prepare a deep and thoroughly pulverized seed bed, well drained; break in the fall to a depth of 8, 10 or 12 inches, according to the soil, with implements that will not bring too much of the subsoil to the surface. (The foregoing depths should be reached gradually if a field is broken with an ordinary turning plow. If a disk plow is used, it is safe to go to the above depths at once.)

It is the purpose to insist upon such preparation of the soil as will furnish the best feeding grounds for the roots and such as will provide at all times plenty of moisture and food for the growing plants. It is better to secure 10 or 12 inches of well-drained, thoroughly pulverized soil filled with hu-

mus than to go deeper at the expense of less thorough preparation.

The presence of heat, air and moisture is essential to chemical and germ action in the preparation of plant food in the soil. The depths to which these penetrate the soil in the South depend upon the depth of the plowing, provided the soil is well drained. There is no use in plowing down into a subsoil full of water.

It has been proved without question that the roots of plants penetrate the soil deeper and feed deeper is deeply plowed land. Thus, in general, it may be stated that when the soil is plowed 3 inches deep the plants have 3 inches of food, when plowed 6 inches deep they have 6 inches of food, and when plowed 10 inches deep they have 10 inches of food. The fact that the bottom portions of the plowed land are not as rich in available plant food as the top portions shows the necessity of getting more air and heat down to them by deeper tillage.

The soil requirements most essential to the growth of plants are heat and moisture. Deep breaking insures air and heat at a greater depth.

For plants to do their best there must be in the soil a constant supply of moisture, so that a film of water can envelope the soil particles and absorb nutritive elements. The hair roots of plants drink this for nourishment. If there is any more than enough to serve as films for the soil particles and capillary water, there is too much, and it should be drained off. This can be determined by digging a hole 20 inches deep. If there is standing water in the bottom of the hole, it indicates that there is too much water in the soil or subsoil.

The capacity of a given soil to hold film and capillary moisture depends upon how finely it is pulverized and upon the amount of humus in it. Unplowed lands retain but little water. Thoroughly pulverized soil 3 inches deep can not store enough to make a good crop.

In all Southern States there are every year periods of drought, sometimes not serious, but generally sufficiently protracted to reduce the crop. The remedy for this is increased storage capacity for moisture. This can be accomplished by deep and thorough tillage and by filling the soil with humus (partly decayed vegetation).

The effect of deep tillage has been plained. The effect of humus is to crease greatly the storage capacity soils for water and to reduce evaporation. A pound of humus will store seven and one-half times as much moisture as a pound of sand, and the sand will lose its water by evaporation three and one-half times more rapidly than the humus. A clay soil will store only about one-fourth as much moisture as humus, and will lose it by evaporation twice as rapidly.

Plants use an enormous quantity of water. An acre of good corn will absorb and evaporate during its growth nearly 10 inches of water. About three-fourths of this amount will be required during the last seventy-five days of its growth, or at the rate of 3 inches of water a month. This is in addition to evaporation from the soil, which, even with the retarding influence of the dust mulch, will amount to several inches each month in midsummer. In case the land is plowed only 3 or 4 inches deep, though thoroughly pulverized, it will store an amount of moisture entirely insufficient to supply crop requirements in any protracted drought. These shallow and generally poorly prepared seed beds are the principal causes of the low corn yields in the South, and they effect the cotton yields similarly but not so much, because cotton is a more drought-resistant plant than corn. If planting is done at all, it is folly to prepare a seed bed so shallow as to bring about the almost total loss of the crop some years and a reduced crop every year.

Many farmers plow or cultivate their corn nearly as deep as they break their land in preparing a seed bed; this leaves so space for roots in the pulverized and aired soil. Roots occupy a large space. If all the roots of a single vigorous cornstalk were placed end to end they would reach more than a mile, and if allowed by the plowing they will fill the soil to a considerable depth and feed in all portions of it. In the principal corn-producing areas of the South the annual rainfall is 35 inches or more, and here in a soil properly prepared for corn the great body of the roots will lie from 3 to 12 inches from the surface and will feed within 2 inches of the surface if allowed by shallow cultivation.

## What is Deep Plowing?

Plowing three, four, five or six inches deep is only common plowing. Nothing less than eight inches is considered "deep" plowing. We are not advocating a single breaking of 8 inches in depth once in two or three years, but the preparation of an 8, 10

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or 12-inch seed bed thoroughly pulverized and filled with humus. It is not intended here to insist that this should be done at once in all cases. These are the depths that must be reached finally to secure the best crop results. The farmer must determine how soon he can secure these depths under his conditions.

#### When Should This Plowing Be Done?

Always plow in the fall before the winter rains set in—the earlier after the 1st of October the better. Always use a cover crop of oats, barley, wheat, rye, vetch or crimson clover, if possible. Every observant farmer has noted that seeds germinate more quickly and that plants grow more rapidly on fall-breaking than on spring-breaking. Fall-plowing renders more plant food ready for use, while the preparation of the land in the fall saves work in the spring, when everything on the farm is crowding. A cover crop is a net gain. It keeps the soil from washing, it utilizes the plant food that otherwise might escape into the air, and it adds humus. The soil is improved by the crop, and winter grazing is provided. In plowed land properly handled the loss of plant food is less than in unplowed land; more plant food may be produced and more can be stored. In case a cover crop is used the loss of plant food is slight.

An objection is sometimes urged that fall-plowed soil becomes saturated with water during the winter and remains wetter and colder later in the spring than land left unbroken in the fall. This is true only upon land not sufficiently drained and where the breaking is shallow. Water passes through deep breaking readily, and with reasonable drainage it is ready for planting earlier than lands broken in the spring.

With deep breaking and an abundance of humus it will be possible to dispense with many terraces and yet have no washing of the soil. Terraces are seldom required on the steepest hillsides of the north. Deep freezing opens the soil for the absorption of the rain.

When land is nearly level, with a stiff subsoil, it should be flat-broken, but left in rides or narrow lands about 5 or 6 feet wide, suitable for planting, with a dead furrow between. This provides winter drainage and keeps the pulverized soil out of the water, which is important even if unbroken.

#### Deepening the Soil

The advice to go down gradually is given solely because the inexperienced farmer may try to plow too deeply the first time and bring to the surface too much of the subsoil. The best

plan is to use the disk plow, so set that it will not bring the subsoil to the surface. Generally it may be sent down 8, 10 or 12 inches with impunity, and, if done in the fall, with slight addition to the cost of shallower breaking. Double plowing—that is, to break at the usual depth and then follow in the same furrow with a narrower plow or scooter and go down as deep as desired—is better than shallow plowing, though a little more expensive plan than the use of a disk plow and not so effective. Many trials made on a great variety of soils show that the cost of plowing 18 inches deep with a disk plow is on an average about 50 cents per acre more than ordinary breaking, and in double plowing, as above described, the additional cost averages \$1.25 per acre. These costs are somewhat less when a 10-inch depth of plowing has become the rule upon a given field. There is no question that breaking and pulverizing to a depth of 8 to 10 or 12 inches and adding plenty of humus is economical. Whether a plant has plenty of food all the time or only part of the time makes the difference between a good crop and a poor crop.

#### Is It Advisable to Plow Deeper Than 8, 10 or 12 Inches?

The depth of plowing must be determined by the farmer himself. He knows the conditions and is the best judge of the cost. In many sections, if done in the fall, it undoubtedly pays to subsoil 15 or 20 inches. This has been proved by some of the best farmers and experimenters in the world. Some subsoils in humid climates have been made so close and compact by the abundant rainfall that air does not penetrate them to aid in preparing plant food. Such fields, therefore, may not show any benefits of subsoiling until after two or more years.

It rarely pays to subsoil land in the spring, and it is never advisable to use the subsoil plow when the subsoil is fully saturated with water, even though the surface be fairly dry. Under such conditions of plowing the clay subsoil is pressed and packed, when the object is to pulverize it and allow the air to act upon it.

#### Experience Agrees With Theory

No principle in agriculture has been more thoroughly demonstrated than the value of a deep, thoroughly pulverized seed bed.

The Romans plowed on an average 9 inches deep—always three times for a crop, and in stiff lands nine times. They did not call 3 inches "plowing"; it was only "scarifying."

The Flemish farmers were the first to follow the better lines of agriculture after the Dark Ages. They devoted their efforts to three main points—(1) the frequent and deep pulverization of the soil, (2) the accumulation of manure, and (3) the destruction of weeds.

A deeper and more thoroughly pulverized seed bed was the foundation upon which England built an improved agriculture, and this principle has been generally accepted there for more than one hundred and sixty years, until the average production has increased nearly fivefold.

Nature's plan of improving soils is to use a cover crop of weeds, grass, shrubs or trees and to subsoil by sending the roots down 1, 2, 3 or 4 feet, as the case may be, thus airing and enriching the subsoil without bringing it to the surface.

Thousands of tests have been made

each year by exact and painstaking farmers to an extent that leaves no possible room for doubt as to the great value of a deep and thoroughly prepared seed bed.

Concretely stated, a deep, thoroughly pulverized seed bed filled with humus has the following advantages:

1. It provides more food, because it increases chemical action and multiplies bacterial life in a larger body of soil.
2. It stores more moisture and it loses its moisture less rapidly on account of its cooler lower strata and the presence of more humus.
3. It increases the number of roots that a plant will throw out.
4. It allows plants to root deeper and find permanent moisture.
5. It largely obviates the necessity of terracing, because it holds so much water in suspension that heavy rainfalls will go to the bottom and be held by the drier earth above until they can be absorbed by the subsoil.
6. Humus enables the soil to store more moisture, increases its temperature, makes it more porous, furnishes plant food, stimulates chemical action, and fosters bacterial life.

#### Exceptions to General Rules for Deep Fall Plowing

1. Never plow below the line of standing water in the soil, because the subsoil can not be pulverized in water. The water level must first be lowered by drainage.
2. Do no deep fall-plowing on light sandy land or dry, semi-arid plains, and this especially applies to elevated sandy table-lands and most of the deep sandy lands of the South. Such lands can be helped by adding humus and using a winter cover crop.

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3. The object of deep fall-plowing is mainly to increase the supply of plant food and the storage of moisture in the soil. While this preparation is of great value on rolling lands and nearly all fields so long in cultivation that plant growth is medium or less, there are some soils that for the production of cotton better not be deep fall-broken, such as very rich and moist river bottoms and the virgin black-land prairies of the Gulf States, for the evident reason that there is too much plant food already available in the soil, with abundant moisture—conditions that make for an excessive growth and a consequent decrease in fruitage even under ordinary conditions. For the crop upon such lands it is better to plow very shallow in the spring and bed upon the firm soil.

4. Do not plow deeply or subsoil in the spring. The subsoil is generally too full of water, and it is too late for much effective action of the air upon the soil, and for the winter rains to firm the subsoil before planting.

5. Thin gray soils underlain with yellow or stiff clay near the surface, most of the post-oak flats, and the comparatively level coast lands should be broken in ridges (backfurrowed) five, six or seven feet wide, according to the crop to be planted. Corn may be left thicker in the row, to offset the wider space between the rows. The dead furrow between the rows should be double plowed and made as deep as practicable, with a good outlet for the water. This method will gradually deepen the soil, increase drainage, reduce washing and give a larger and deeper body of loose, aired earth for the roots. This plan is excellent when surface drainage is necessary. Soil to be live and friable

must be kept out of standing water winter and summer.

The sugar planters of Louisiana all use the ridge method (generally 7 feet wide) for both sugar cane and corn. The dead furrow is as deep as a plow drawn by four or six heavy mules can penetrate at the last breaking. This gives an average depth of tillage of 12 or 15 inches.

#### Winter Management

In case no winter cover crop is used the soil should be disked or harrowed two or three times during the winter, provided it is dry enough. Give good drainage to all parts of the field.

Any cultivation done after the deep fall-breaking should be shallow—not more than 3 or 4 inches deep.

October 15, 1911

**IMPROVEMENT OF COTTON BY SEED SELECTION**

Careless cotton farming and gin-run seed are responsible for a lot of short cotton crops. There is but little pure-bred seed planted, and the product of that little generally becomes more or less mixed in the field and at the gin.

Five points should be carefully noted in cotton-seed improvement: Type, variety, selection, ginning, and storing. A farmer should determine the type of cotton he wants to produce. He can in the end produce what he wants if he studies and works for it. By "type" is meant the kind of stalks, boll, lint, etc. The type generally preferred is a strong, short, vigorous stalk, with plenty of fruit limbs on the lower half; fruit limbs short jointed but extending to the outer border of the plant and fruiting to the end; large bolls, storm resisting; a heavy percentage of lint; staple, if large-boll cotton, at least  $1\frac{1}{8}$  inches and strong; plant hardy, early, and prolific.

**Choosing the Variety**

Plant seed of a variety that produces cotton as near the type you want as possible. It will not be exactly your ideal, but if good seed and of the right variety it will come near it. Plant this seed on a separate tract of land, or plat, so it will not become mixed by insects. Every farmer needs a seed plat just as much as he needs a well-bred male if he is going to improve his stock. Thin and cultivate this plat in the best way.

**Selecting the Seed**

Let us go personally to the seed plat in the fall with a sack over our shoulder and make selections. Here is an ideal stalk about three feet tall, loaded with choice bolls. There will be more than a pound of lint cotton on it at maturity. Around the heart of the plant we select the best bolls, rejecting the bolls on the ends of the limbs and near the top and a few that are so low as nearly to touch the ground. The top and end bolls tend to later maturity and the seeds in the bolls too near the ground absorb the moisture and are not as vigorous as they should be.

The next stalk is not quite so perfect, but it is pretty good, and we take a few of the best bolls. On the next stalk are four or five great fine bolls. My man was along with a sack and he was just about to pick them; in fact, his fingers had closed over one. "Let them alone," I called out. "Look at that stalk; it never thought about going into the cotton business until it was half grown. There is only about an eighth of a pound of cotton on it if all the bolls mature. That plant has some bad blood in it or is a black sheep in a good flock. We do not want to raise that kind."

Then we passed several plants not very good and not very poor. Just a few feet along the row I noticed two remarkably fine bolls near the top of a stalk. Something called my attention away, and when I looked back my man had them.

"Ain't they fine?" he remarked, and he gave a smile of satisfaction. "Right," I replied, "if you do not see the plant. They grow too near the top and will tend to make our crop late." "If you are going to be so particular we shan't get much cotton seed," he answered, rather shortly. "Bob," I replied, "I am through making these quarter-of-a-bale cotton crops. They say that like produces like. Now, that first stalk of cotton we picked had over a pound on it and if all the stalks on this plat were just like it we should get three bales of cotton or more per acre. I intend to make a three-bale crop, and I am going to commence by selecting the right seed to do it."

The next plant was loaded with bolls, but it did not stand over 18 inches high. "That is a perfect plant," I remarked, "but we will not take any bolls from it. It is too small. Never select a runt pig for a prize winner at a fair. If I had an acre of such plants they would not hold as much cotton as I want."

In this way we went over the two-acre plat and secured 200 pounds of seed cotton. This was carefully stored and ginned.

The next year there were three times as many perfect stalks in the field as the previous season. In three years nearly every plant was a model and we had a three-bale crop.

In making selections never pick a boll for seed except from a plant that is just what you want your crop to be next year. You can not buy such seed. Raise it.

Select your seed early for next year's crop.

**Ginning and Cleaning Seed Cotton**

Store your selected seed in a dry place and wait until the steam gins are nearly through; then carefully clean the gin, put down a sheet to catch the seed, and

run your selected lot through. Store in a dry place till it is time for planting.

Before planting, run this seed through a fanning mill, blowing out any seeds that may be light and screening out any that are too small. Follow this method just as closely as possible. A peck of such screened seed will produce more strong plants than a bushel of the seed commonly planted.—Dr. S. A. Knapp.

## MEMORIAL DAY ORATOR SON OF A GREAT MAN

S. A. Knapp, Father of Man Who Will  
Speak Here, Revolutionized Rice  
Culture in the South.

Mr. Bradford Knapp of Clarion, county attorney of Wright county, and one of the finest orators in the state, will deliver the Memorial Day address in Forest City. He was educated in the South, graduating from the University of Tennessee and Carnegie University, and later took the law course at Ann Arbor, Mich. His father, S. A. Knapp, was one of the greatest men in his particular line that this country has ever produced and for the benefit of those of our readers who are not familiar with the name or the achievements of the man the following biographical sketch is submitted:

S. A. Knapp was president of Ames college about fifteen or twenty years ago. On account of ill health and for other reasons, he resigned his position and went south, locating at Jennings, Alabama. Here he entered earnestly into the study of agriculture and horticulture and as his work became generally known he was called upon to make speeches all through the southern states, at colleges, agricultural meetings and conventions. His persistent advocacy of improved methods of cotton, cane and rice culture attracted the attention of the national department of agriculture and in this connection he was called upon repeatedly to furnish information and advice. When James Wilson was appointed secretary of agriculture he arranged with Mr. Knapp to act as his representative in numerous instances, in securing data for the department and was finally placed in charge of one of the department offices. Shortly afterward a fund was created—the government appropriating \$100,000 and Andrew Carnegie \$75,000—which was placed at the disposal of this man Knapp for the purpose of securing suggestions and practical help from any quarter of the globe that would be useful in advancing the agricultural interests of the south. In the pursuit of such knowledge Mr. Knapp traveled all over the world, visiting Japan, China, India, Siberia, Africa, Australia, the islands of Ceylon and Borneo and through various parts of South America—selecting grain and other agricultural products which presented easy and profitable adaptation to the soil of the United States. In the course of his investigations he discovered upon a peculiar kind of rice in India in quality so far superior to anything of the kind grown in this country that he immediately secured a large quantity of the cereal and returning to this country, arranged with a number of the leading planters of the south to use the seed, upon the agreement that its cultivation should be carried on under his direction and advice, guaranteeing that if the seed failed to mature and produce a more profitable crop than the

who ever went into southern territory.

It is probably not generally known that in order to produce a rice crop, it must be grown and brought to maturity in water. After the ground is prepared, as in this country, and the seed is sown, the rice field must be flooded from a depth of from eighteen to twenty-four inches and kept under water until the rice is matured and ready for harvest.

The above information was given to the Summit by one of our leading citizens who has had some experience along this line. He states that he has witnessed the harvesting of rice when the ground was still covered with water to a depth of twelve to sixteen inches.

This great work which Mr. Knapp accomplished for the south is not by any means the sum total of his achievements. He has introduced many new features in cotton and sugar planting which have increased the value of these crops very materially throughout the south. He was the man who introduced the present method of rushing the cotton crop ahead in order to avoid its destruction by the boll-weevil, a pest which became so destructive that it became practically impossible to produce a paying crop. After several years of investigation, Mr. Knapp concluded that there was no way to get rid of this boll-weevil, and the only way possible to save the crop was to rush it along so fast that it would be out of reach of the insects by the time they were hatched out. He found that the weevil required a certain number of months to mature and hatch out, the young cotton buds or bolls being appropriated by Mr. Weevil for food and sustenance. Hence, the logical method was to push the crop along so far that the bolls would be too old and fully matured for the insects to tackle by the time nature released them from their shells, and the bugs would starve to death. This is exactly what happened upon demonstration, and the method has given even better results than expected and is acknowledged to be far superior to the usual plan of importing some foreign bug to prey upon the harmful insect.

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Up to the time that S. A. Knapp introduced the new seed into the south, the planters had used a seed which could not be successfully hulled; that is, after threshing, when the rice was put through the hulling machine, to remove the coarse outer covering of the grain, the white or inner portion was so soft that it would not resist the force of the machinery required to hull it, hence the kernels were mashed and the average income from the crop reduced in many cases two-thirds. The introduction of the Japanese product was not only an innovation but a decided godsend to the southern planters. The kernel of the new grain was sufficiently dense to withstand the force of the machinery used in the hulling, and they emerged whole and unbroken from the process, clean and of such fine quality, that the market price was gradually increased more than two hundred per cent over that derived from the seed previously used. The manner of cultivation was also changed for the better. A different and less laborious method of preparing the ground was instituted, the period of flooding was shortened, the crop matured in much less time, and harvesting made possible immediately after the water had subsided.

The successful outcome of Mr. Knapp's efforts in behalf of the rice planters naturally won for him legions of friends, and he is today one of the most popular northern men

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your cherries and plums. Cut the scion seven inches long and the root three inches. It is best to use only the top part of the root. Graft and wrap them in the same manner as you do the cherry, but the apple graft is never waxed. Pack away in the same manner as the cherry, in sand, only instead of putting the sand merely on the roots, put it clear up to the top of the grafts. The object of making the root short and the scion long is that the root of the apple will grow easily and quickly, and being planted deep, the scion will also throw out rootlets. The next spring set out in rows, the same as the cherry, four feet apart, and the grafts six inches apart. Keep them clean during the first part of the season, and about the first of July sow buckwheat among them, thus keeping the ground cool and moist during the following hot months. Seedlings are usually left in the nursery rows until two years old. As a general thing the roots ex-

It is always best to plant a low stemmed tree, because if the stems are high the sun is very liable to scald and burn the tree on the south side. On all trees it is best to have one straight stem and the others starting out from this. The best time to take up the trees to set out in the orchard is in the fall. After taking up make a trench about two feet deep, with one side straight down, and lay the trees in this with the tops toward the south; then cover them with earth, then a layer of trees and another layer of earth, etc., etc., until you get them all in, when they should be entirely covered with dirt and left in that condition during the winter. The process I have just described is called "healing in." If you cannot take up and heal in in the fall it should be done in the spring, for you will naturally enough cut the roots when taking up, and during the time they are healed in they have time to recover in a great measure from the injury. Do not set them out in the spring until the natural time for growth, or when the buds begin to start. They will not grow before this time anyway, and they do a great deal better in the trench than outside until that time.

Always dig the holes in advance, select a cloudy day for planting and put your trees in rapidly. Dig the holes four inches deeper than those for the nursery. Spread the roots out and press the earth down around the roots very firmly, leaving the ground dishy around the tree so that it will catch water when it rains. It is always best to lean the tree toward the south at a strong angle. This may not look near so well as to set them upright, but we must pay more attention to profit to ourselves and good health for the trees in this matter. By leaning the trees to the south in this manner sun scalding is prevented to a great extent, for the top being partly between the sun and the trunk shades and protects it from the heat, as the tops and roots are both strongest on the north side they will gradually pull the tree back into an upright position.

The best soil for an orchard is where, when in digging a well, you find a porous subsoil for about twenty feet. In a subsoil like this the water will rise during a drouth, and in a rainy season it will sink into the ground. The worst soil for an orchard is a blue, stiff clay.

In central Iowa, apples should be planted 20x30 feet apart; in the south part 18x24 feet apart. It is best to plant them by what is called the Quincunx plan, that is, so they will row in five different directions. In this way you get just as many trees to the acre as in any other, and each tree has more room to spread. A good way to measure is by a board having a notch in the middle and pin-holes in the ends, thus getting every tree just where you want it. This way of measuring is probably familiar to most of HOMESTEAD readers. After the trees are set out it is generally considered best to plow the ground at once. In the fall throw a little mound around the bottom

ed tree on the lawn. It is, when grown as a bush, from four to eight feet high, that the dark green polished leaves, flashing in the bright sunlight, reveals its incomparable beauty. No laurel leaf is darker or more glossy, and its slender branches permit its being swayed by the wind and revealing its beauty."

As it proves equally hardy on the prairies of the Northwest its future value on the lawn, as a street tree, and for ornamental hedges and windbreaks can be readily understood. We also have new forms from the great east plains of Europe which are still more desirable. J. L. B.

#### AN INTERESTING LETTER FROM PROF. S. A. KNAPP.

DEAR HOMESTAD:—On the 14th of Nov. I said good bye to the friends at Ames, and started by way of Chicago, for the land of flowers. From Chicago to New Orleans I Central. These coaches are such marvels of comfort and the time made is so good, that one almost regrets to part with coaches and train on arrival at the Queen City of the Gulf. The Illinois Central is doing every thing in its power to make travel between north and south pleasant and expeditions. Upon the streets of Chicago, it was difficult to keep warm with a heavy overcoat on; Tuesday morning as I alighted from the cars it seemed like June, thermometer 70 in the shade, the sky cloudless and the air very genial. New Orleans is a city of few changes. Everything precisely as it was last winter, and in all the winters for twenty years. Of all the great forces that build and perpetuate a city, in this city the railroads alone seem to be active. They have taken a deep interest in the success of the present exposition and will make unusual efforts to further its interests. It is now only a ride of twenty minutes by the Illinois Central, from Canal street to the exposition grounds. The visitors of last season will remember that it took nearly an hour by the slow, circuitous and frequently over crowded horse cars to make the same trip from central portions of the city.

In some future letter I will speak of this exposition somewhat fully, as it deserves well of the American people, and will tend, as did the last, to bring the two extremes of this great country into industrial sympathy, that they may aid and support each other. On Tuesday evening at half past seven, I took the Morgan Railroad for Lake Chartos, distant from New Orleans, two hundred and seventeen miles, nearly due west. On arrival at Lake Chartos, at 4 a. m. as I passed from the car, a colored boy stepped up and asked, "Is this Prof. Knapp?" On my reply in the affirmative, he said he had orders to take me to Prof. Thomson's. It is known to many of our Iowa people that Prof. Thomson left Ames last year to make a permanent home in this beautiful portion of the south. At Prof. Thomson's I found a house full of guests, among whom were the Hon. Charles Hoyland, secretary of the Society of Friends of England, the Hon. H. G. Chalkley, of London, Mr. Chalkley and son, from Australia, and Hon. J. B. Watkins, of New York. With their proverbial hospitality Prof. and Mrs. Thomson insisted that their house had still plenty of vacant rooms, and I must accept the assignment of one of them at the risk of their displeasure. During Wednesday forenoon, Mr. Watkins announced the plan of our work for the week. My duty for the remainder of that day was to visit, become acquainted with the distinguished guests present and look about the city. On Thursday morning all parties would go up the Calcasieu river on a deer hunt to be absent three days.

#### MRS. THOMPSON'S GARDEN.

Since my first visit to this section last year, I have had great faith in its possibilities, but a genuine surprise awaited me when Mrs. Thomson invited us to visit

Thursday, Dec. 15, 16 and 17. The sessions will be held in Masonic Opera House, beginning at 2 o'clock p. m. Tuesday, address of welcome, president's address, and other ceremonies of the occasion occur Tuesday evening. Persons who desire to engage rooms should address local committee at Oskaloosa, of which W. Johnson is Chairman.

Oskaloosa is easy of access, having C., R. I. & P. from Davenport, Keokuk, Knoxville and Des Moines, the Central Iowa from Albia, Mason, the B. & W. from Burton, and C. & N. W. from Rapids. Reduced rates may be expected by those who become members of the association. Hotel accommodations will be provided at reasonable rates. The City of Oskaloosa will welcome its guests and all in its power to make them comfortable.

An effort will be made to secure papers from parties well able to write them, so that every one who can attend the convention shall come "loaded for battle"—or better yet, "loaded for business." Be ready to make up the issue of our time and trade, and discuss them to the interest and great profit of the convention. No formal programme is heretofore announced. The issue is with the dairymen of the State, who know that a good convention is always entertaining and a great benefit, and who also know that a grand success this time is imperative. It is with you, gentleman. Consider the condition of the dairy markets during the past year. Reflect for a moment upon the huge frauds in adulterations that are sapping the very life of the dairy business all over the West, and then settle with yourself whether you can afford to remain silent and stay away from the meeting. "To be or not to be, that is the question." "Shall we gather strength by irresolution and inaction?" "Shall we lie supinely on our backs until this enemy shall have bound us hand and foot?" Not only are the men of Iowa who are actively engaged in dairying interested, but all farmers and stock men, and all consumers of butter, have a part in this matter. Dairymen just adopt the motto, "United we stand, divided we fall," and stand shoulder to shoulder for honest goods and fair dealings.

In order that the Iowa Association be a power in this work, it must have a large membership and liberal funds. Attend, enroll and work.

A word to Southern Iowa dairymen. This location is selected in your behalf. Five years ago it was called NORTHERN IOWA B. & C. Association. It is now IOWA, and the men from the north are coming down to meet you in convention. Let us show the same loyal interest in the Association that our brethren have manifested for ten years past.

R. M. LITTLE, Secretary.

Abingdon, Ill., Stock Men.

It was our privilege, a few days ago, to stop a few hours among the fine stock breeders of the vicinity of Abingdon, Ills. The herd of

#### J. S. LATTIMER & SONS

whose dozen or more years experience has enabled them to develop some very choice individuals of the choicest blood was first viewed. Mr. L. and his sons are born cattle men, and from the start have seemed to have Gen. Grant's campaign advice before them to "Push things." They have been content only with a trade extending beyond the mountains of the West and many leagues in every direction from their center of business. The older sons have gone beyond the Missouri river and are already doing an extensive business there. Mr. L., senior, and his youngest son still continue the old stand with constant extension of the business and improvement of their Shorthorns.

They have been bold in assuming the expense of securing the best foundations, and

former, but the latter ed upon some one else fortunately for his own well being of society, he is compelled to res needle himself. And chance to fall to his le with this little weapon deed to see the wa clutches the poor need without tying a knot mences to put on the on the exact spot occ predecessor; he push and draws the thread three inches of the th lee way, thinking an easy time women but sew on buttons. the other way, gets th cloth easy enough, an of the eye of the but ing all his ef being a little ref bucking against the ton, and finally, whe finger catches in the inches he left to l through the eye in button rolls leisurely picks it up without and proceeds to mak order that he may his attempts he plac over the button, and little member he se for the button's eye, comes more and mo to grow impatient. jabbering about in a ner, when suddenly t up through the butt tance through his th the thing making, at familiar quotations a thumb between his under his arm, and into his mouth. An bemoaning over his there never was any world was created. for some time, but fir on his pants, fastens goes forth to the bu changed man.

A. C. Moore

Some forty years a man in Ohio whose ness was an idea at patience necessary to it up. That idea was raising as of sufficien a man's attention a small beginning the some seven years in ject, Mr. A. C. Moore with his arrival, a t was founded the now in breeding Poland-C firm of A. C. Moore d was a rare treat to a pondent recently to s this gentleman, whos ing is world-wide. I during a part of his for a just recognitio the world now recog superior. The untiri faltering faith in th characterized Messrs. stock before the pec not only untarnishe steady improvement. our own extensive co China now recognize sea and around the appreciated, and no find the sale of a tho annually scarcely s demand. When it is breeders of this favo bers several thousand and retained by this prising. Yet the se

# Prominent Men I Have Met

BY DR. L. H. PAMMEL

## SEAMAN ASAHEL KNAPP

It is fitting that I should include in this series of short sketches an account of Dr. Seaman A. Knapp who won for himself an enduring place in the educational and agricultural fields of this country. Lester S. Ivins and A. E. Winship in "Fifty Famous Farmers" say: "No American has had a greater agricultural influence over wide territory and over so many years than had Seaman A. Knapp. O. B. Martin in "The Demonstration Work" quoting from an address made by Dr. Knapp in 1906 before the Ninth Conference for Education in the South at Lexington, Kentucky: "We then learned the philosophy and power of agricultural demonstration." Mr. Martin says: "It is good that this man, who was literally the first demonstrator of the great movement as now constituted throughout the country, should have realized that he was furnishing object lessons not solely for the benefit of himself and family, but also for his neighbors. Thousands have followed in his footsteps and have been actuated and inspired by the same motive. It is almost superfluous to say that the bankers and business men did not have to indemnify him for failure."

Mr. Wallace Buttrick, secretary of the General Education Board, in an article on Seaman A. Knapp's work as an agricultural statesman in Review of Reviews, quotes F. C. Gates as saying: "There is abundant knowledge of the science of agriculture; if these people could have that knowledge in some practical form there would be no limit to the output of southern agriculture."

It was during the study of southern economic conditions and education that Mr. Gates and Mr. Ogden found Dr. Knapp. Later the General Board of Education made a small contribution for this extension work in the state of Mississippi. This was in 1906. From this little beginning there developed wonderful work in connection with the boys' corn crops clubs, canning and poultry clubs which has been of tremendous importance not only in the south but in the country as a whole. Walter H. Page, our ambassador to Great Britain, was greatly interested in the development of the south economically and educationally. Mr. Page's work in behalf of this better educational system is interestingly brought out by Burton J. Hendrick in "The Life and Letters of Walter H. Page." Mr. Page often regretted that the south did not have the comprehensive system of education that the north and west had. He soon found that in order to bring about the educational system that agriculture would have to be taken into consideration. Dr. Buttrick set to work to devise a plan but found little that could be done until his attention was drawn to Dr. Knapp in the words of Burton J. Kendrick: "A quaint and bucolic Ben Franklin—who was rather obscurely working in the cotton lands of Louisiana, making warfare on the boll weevil in a way of his own."

Yet he had evolved a plan for retaining country life and making American farms more fruitful. It was Dr. Knapp's contention the only way to improve agricultural conditions was not to talk but to select a farmer, persuade him to work his fields according to the best methods which can be prescribed for him. It was further interestingly related by Mr. Hendrick that Mr. Burton brought Dr. Knapp and presented him to Page. This was precisely the kind of man that appealed to Page's sympathies. Mr. Page regarded Dr. Knapp as one of the greatest men of the time. Page pleaded his cause with great eloquence before the Educational Board. At the funeral service in Washington he said that Dr. Knapp would outrank the statesmen and politicians that received the world's plaudits because Dr. Knapp had devoted his life to a really great purpose; his inspiration had been a love of the common people; his faith, his sympathy had all been expended in an effort to brighten the life of the neglected masses.

Dr. Knapp not only had a great mind but he was a man of great vision and he could eloquently plead for the right thing. At the Mississippi A. & M. College he said: "For once in the history of civilization let us have a common people thoroughly trained within the lines of their duties, full of science of how to get a living, refined, courageous, and loyal to government and to God."

It was evident from his addresses that he was a lover of the great "out-of-doors," and in order to develop a virile manhood and womanhood it would be necessary to bring this contact with country life. Not only did he want to develop the economic side of agriculture but he wanted to see a fine and full rounded life and that, he thought, could only be developed through the heart, mind, and body. It was in the city he felt that the dense population was a menace to this kind of development. In an address delivered at the Mississippi A. & M. College in 1884, he said: "Each square mile of dense city population should occupy in the future one hundred square miles of territory." In other words it was this rural contact that would

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What led up to his great constructive work is an interesting story. He had a good, strong background. His father was a physician and a man of fine culture, his mother also was a woman of generous impulses and was broadly educated. It was in the little village of Schroop on Lake Champlain in the state of New York where he received his early training. This village had the finest kind of traditions. He was born on December 16, 1833, and died in Washington, April 1, 1911. His early education was at the Troy Conference Seminary, located at Fort Edwards, and finished at Union College, Schenectady, New York, receiving the degree in A. B. in 1857 under the presidency of Eliphalet Nott. He received

(Continued)

## Prominent Men I Have Met

(Continued From Page Two)

Interesting story is related therewith. On one occasion, Dr. Knapp was with three distinguished educators, college presidents. These men noticed he was wearing a Phi Beta Kappa key. One of the educators said, "I notice that you are wearing the key of a classical honor society. How did you get it?" Dr. Knapp promptly responded, "I got it by the same hard work you did to get your key." Quite a number of institutions conferred the Doctor of Laws and the Doctor of Science degrees on him. From Iowa State College, he received the Doctor of Science degree in 1909. After graduation from Union College he was professor and associate president of the Troy Conference Seminary, later becoming connected with Ripley Female College, Poultney, Vermont, then teacher and associate manager of Fort Edward Collegiate Institute.

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It was my pleasure to have met Dr. Knapp a great many times. He was a man of pleasing and compelling personality, an outstanding figure in every way. When in his presence you felt that you were talking to an extraordinary man. St. Clair McKelway, editor of the Brooklyn Eagle after hearing one of his addresses said: "That man is a combination of Socrates, Horace Greeley, and Gladstone."

At fifty-three years of age we see Dr. Knapp starting out on a new enterprise in Louisiana to improve farm conditions. The boll weevil was the opportunity to open the door of great possibilities to educate the planters to follow a better system of agriculture. He was seventy years old when the boll weevil appeared. Most people say old but he was young and vigorous. Some of his real life work was done at this time. Dr. Knapp for nine years had charge of this extension work in the south.

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"The great need of the many is a more scientific and practical knowledge of the common things of life; to the masses the philosophy of the cottage is more important than that of the palace, and the result of the battle between force and matter of deeper moment than one hundred Waterloos. The great captains of the future must marshal the hosts of industry upon the farm and in the workshop."

And again in an address in 1884 delivered at Ames, he says: "The whistle of the plow-boy, the tumult of trade, the rumblings of engines, the music of the water wheel, the din of hammers, the rattle of looms, rise in a grand chorus of industry all over the land. These are the living evidences of the power of faith and hope."

"The broad statesman, the profound scholar, the zealous reformer, the men who organize liberty and found republics, who plan moral revolutions and lead the forces, have positive convictions. They believe in mankind, in the great future, in the enduring character of God. It does not require any great strength of intellect to destroy or to doubt."

Dr. Knapp said: "The farm must be made a place of beauty attractive that every passing stranger inquires: 'Who lives in that lovely home?' The home is of minor consideration, the gorgeous setting of trees and shrubbery holds the eye."

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It was my pleasure in November, 1892, to have been one of the group of agriculturists and scientists to attend the convention of American Agricultural Colleges and Experiment Stations held at New Orleans. The delegates from the north and west chartered several Pullman coaches in Chicago. The Illinois Central railroad was anxious that we should have the best of service and therefore Captain J. F. Merry of Manchester, Iowa, special passenger agent of the Illinois Central, was on the train to make things pleasant for us. I had many interesting chats with Mr. Merry who spoke about the agricultural development of the south and laid stress on the fact that Dr. Seaman A. Knapp of Louisiana was doing a great work for the south, and it would be through his initiative that the south would be born anew. His words were prophetic. It was through the organization of boys' clubs, and farmers' clubs, and women's and girls' clubs, that the system of agriculture became changed.

Dr. Knapp, as manager of the problems of the Agricultural Development Company of Louisiana, had a tremendous responsibility. The scattered farmers of this region were not successful as agriculturists. It was one vast cattle range in a country not really adapted to the raising of cattle. Dr. Knapp made a study of the agricultural problems and decided that rice growing had greater possibilities in that and the neighboring state of Texas, and so Dr. Knapp really became an authority on the subject of rice. He did work for the

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Dr. Knapp at Iowa State College was not only a fine and worthy companion, but an able member of the faculty, always initiating some things worthy of note. We note how the experiments with grasses were trying to see if orchard grass, and tall meadow oats might not prove of some value for Iowa agriculture. The idea of making the agricultural colleges great agencies in agricultural research was an idea that he fostered. The wisdom of national legislation for experiment station work is now generally recognized. Much credit is of course given to the Hatch Act which was introduced in the house of representatives by Congressman Hatch of Missouri. Dr. S. A. Knapp is responsible for drafting the original Hatch Act. This was drafted by him in 1882 and it became a law in 1887. As finally passed only a few minor changes were made from the original draft of Dr. Knapp.

I cannot, of course, speak much about his ability as a teacher. But those who had him in classes mention his precision and clearness in presenting a topic. Many able men were turned out, some of them are conspicuous in agricultural work. I may mention in this connection the late Prof. S. A. Beach, late assistant secretary of agriculture, W. M. Hays, Dr. C. F. Curtiss, Dean of Agriculture at Iowa State College, G. W. Curtiss at one time professor of horticulture at Texas A. & M. College, E. S. Richman, O. W. Rich, J. B. Keffer, Dr. N. E. Hansen, Brookings, South Dakota, Dr. Myron H. Reynolds. Prof. Hays has said of him:

"James Wilson gave larger official service than any other Iowan. Henry Wallace, Sr., preacher, agriculturist and religious agricultural editor, was Iowa's greatest private citizen. And Dr. Seaman A. Knapp, founder of America's system of county farm bureaus, merited the tribute given in Walter Hines Page's address at his funeral: "He was the greatest educator among us."

At the dedication of the Knapp memorial group of oaks on the campus, another of his students, Dr. C. F. Curtis, said:

"This institution is blessed today, and in the generations to come, by the love and veneration of its founders for trees, and by the love for trees which these men imparted to their students. One of these early students has rendered a signal service to this institution in the planting, which he has generously donated and for which he has provided skillful direction. A higher or more appropriate service could hardly be rendered by any alumnus to his alma mater.

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Many years ago the writer of this note was called to investigate a cotton disease, the cotton rot, in Texas. It seemed to me that the only remedy would be in rotation of crops. Cotton was the staple crop. Merchants, bankers, and laborers all adjusted their business to the cotton crop. It was a one crop country. Along in 1902 the boll weevil appeared. It was a Mexican insect. Ordinary methods of insect control were of no avail. The insect was spreading over the state. A panic followed. The boll weevil was a blessing in disguise. The entomologists found the remedy to be diversified crops. But it needed a leader, and that leader was Dr. Seaman A. Knapp who gave directions for the use of better seed, more space for the cotton plant to grow, more and cleaner cultivation, and above all to alternate with corn and other crops in order to combat the weevil.

It is interesting now to look back and see that his study of the cotton boll weevil began to bear fruit when Secretary James Wilson and the Chief of the Bureau of Plant Industry, Dr. B. T. Galloway, made a request to have an appropriation of \$500,000 set aside to meet the ravages of the boll weevil. Half of this sum was appropriated and half of the \$250,000 went to the Bureau of Entomology and half to the Bureau of Plant Industry.

To work out the problem of how to combat this great evil, there was organized the farmers' cooperative demonstration work with Dr. Knapp in charge. Later when the success of this work was demonstrated, it was not difficult to get appropriations for this work.

Dr. Knapp's experience in organizing this work on southern farms led him in 1910 to publish a Farmers' Bulletin number 422, issued by the United States Department of Agriculture in which he gave his rich experience in contact with southern agriculture. Speaking of the boll weevil, he estimated that it was annually invading new territory six miles long and in suf-

When he gave up his work here, he entered upon a work that gave him, in a way, a broader field. He rendered a service to the people of the southern states that made him an emancipator for a better agriculture and for better citizenship. The people of the south have erected a monument to his memory, but the greatest monument that he has, or that any man can have, is the place he holds in the hearts of a grateful people."

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Dr. Knapp said: "The farm must be made..."

efficient numbers to cover each stock for a cotton crop can be produced in spite of the sooner the farmers realize it the better. The effectiveness of these methods is one of the farmers' cooperative demonstration work."

Dr. Knapp made a general study of how best to deliver knowledge of agricultural science to present farmers. In the course of that study we learned of Dr. Knapp and his success in helping present farmers. Dr. Knapp came to Washington for a conference. The question was asked: "Why cannot your method, so successful in boll weevil states, be introduced in all the states of the south?" The answer was: "Federal money cannot be used except to fight an interstate evil, like the boll weevil, for example."

After conference with Secretary Wilson and Dr. Knapp, the General Education Board made a small contribution for the extension of this work into the state of Mississippi. This was in 1906. In 1907 the work was extended to Alabama and to Virginia; the latter state presenting conditions radically different from those existing in the cotton-growing sections. So successful was this work of demonstration farms that in the following year the General Education Board supplied funds for the extension of the work to all the southern states.

At the fourteenth annual conference for education in the south held at Jacksonville, Florida, on April 19, 1911, Dr. J. H. Dillard said: "In pausing thus to pay our tribute of respect to his private life, exalted character and public service, we mingle without mourning the triumph of the victor. No note of failure or defeat attaches to our expression concerning him. It is true that death has claimed him, but the lessons that he taught and the victories over the forces of nature won by his intelligence and imparted by his patriotic humanity to his fellow craftsmen of the farm, will not only remain but will grow in the power of great achievement even after the name of their author shall have faded out of human memory. Dr. S. C. Mitchell called him two years ago the Benjamin Franklin of American Agriculture."

In earlier life his service was given to the north and northwest, but since 1902 his entire time has been given to the farm demonstration work of the southern states.

"This great life has gone out with only a slight recognition in the newspaper press, so strangely are the real values of life misinterpreted. The nation is poorer for the loss of Dr. Knapp, but the plain people, hundreds of thousands of them, are richer materially, mentally, spiritually, because of his missionary work on and for the land. May other hands grasp the torch that he has dropped and carry his unfinished work forward with ever growing light and power and with ever increasing blessing to the people he so nobly served!"

## minent Men I Have Met

(Continued From Page Two)

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# DR. KNAPP TELLS OF THE BOYS' SCHOOL DEMONSTRATION WORK

FAMOUS AGRICULTURIST CONNECTED WITH UNITED STATES GOVERNMENT IN THE CITY.

## 20,000 BOYS TO BE TAUGHT

The Most Approved Methods of Scientific Farming, Under Tutelage of Professor Martin This Year.

Dr. S. A. Knapp, of the United States department of agriculture arrived in this city from Washington last night for a short visit with his daughter, Mrs. A. M. Mayo. Mr. Knapp is very busy just now and leaves tonight for Houston, where he will have a conference with his Texas agents prior to a longer visit to this city.

In regard to his work, Dr. Knapp said to a Press reporter this morning, "I am very busy today discussing work for this section of Louisiana with J. A. Evans, who is the agent of the farmers' cooperative work in Louisiana and Arkansas. We have gotten our work well established now and everything looks very promising for a successful year's work for the farmers. We are enlarging our field of operations all the time and hope to cover twelve states this year.

"The number of field men or agents now engaged in instructing and aiding the farmers is far greater than ever. There being about fifty in Mississippi, from thirty to forty in Louisiana, thirty in Arkansas, twenty-five in Oklahoma, while Texas has at least sixty.

"I expect to spend at least two months in the south on this trip, instructing agents and planning their work. My time is divided so that I have about a week in each state, with the exception of Texas, where I remain two weeks covering the territory under my supervision. As the work extends from northern Virginia to southern Texas, it will be seen that it takes quite an amount of time to personally visit the several districts and see the field men in charge.

## DR. KNAPP TELLS OF BOYS'

(Continued from page on

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(Continued from page one.)

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"One line of work which will receive especial attention this year, is the school demonstration work. I have secured Prof. O. B. Martin of South Carolina for my chief in that department and we expect to see some gratifying results. The school boys are to be given portions of ground in their father's farms so that they may experiment on corn, cotton or other staples and see just how much they can do by scientific, careful cultivation. Prof. Martin will demonstrate on a larger scale than ever before undertaken.

"We do not want to restrict our work to corn and cotton alone as many seem to think, but we want the farmers to take up any other staple product adapted to their soil and grow it in the most successful manner possible. We wish to help them to make the most of their land, their opportunities and in the most practical and economical way possible. Whatever product suits their soil, that is what we want them to grow successfully so that they may realize the best results.

"I expect to finish the work in this section in Oklahoma some time in April, after which I will return to Washington.

"I will be in Lake Charles again in a few days for a short visit.

(Continued on page eight.)

Decatur Ga  
Ga

9-5-12

W. B. HASTINGS.

Memorial to Dr. Knapp. ✓

A living, useful memorial will be erected in honor of the late Dr. Seaman A. Knapp, of the United States Department of Agriculture, founder of the Farm Demonstration Work. The Knapp Memorial Committee has decided to raise \$150,000 with which to purchase and equip a farm and erect a building in connection with the Greater Peabody College for Teachers, in Nashville, Tennessee. The General Education Board of New York has recently appropriated \$250,000 to endow the Seaman A. Knapp School of Country Life. The memorial building for the purposes of this school will be located on the campus of the Peabody College, and will contain a life-sized statue of the south's great benefactor and friend. The farm will be located within ten or twelve miles of Nashville, and will be conducted in accordance with the Demonstration methods. Pure-bred seed and animals will be developed.

SHOES

FROM COMPANY G.

MIAMI, Fla., July 14, 1898.

Mess is just over. We had an excellent dinner today consisting of soup, roast beef, Irish potatoes and baked beans, and the boys are loud in their praise of Bransome Shaddock, who is our chief "chef" for this week.

Well, the rainy season has set in and every day brings its showers. Sometimes they are veritable cloud bursts, but the ever present southeaster blows heaven's fountain on, and for a time "old sol" shines forth in tropical splendor, until the next leaden bank hides his burning face and again the "white city" bows its head to the inevitable. Thus in sunshine and shadow the days go by.

Sometimes we are drilling and woe to those who have left their ponchos.

We had an experience of that kind last evening, and this morning Capt. O'Bryan took time by the fore-lock and ordered every man to take his poncho hereafter. The frequency of the rains has rendered our drill grounds unfit for use and this morning we got no farther than the small stream which forms its western boundary. "Fours right about, march," caused a murmur of delight to run the entire length of the long line of men, but to make up for the omission of this morning's regimental drill, the various corporals put their squads through the "setting up exercises," a form of calisthenics very much needed by the men.

Tuesday morning we had our monthly brigade inspection. I wish you could have been a spectator; 'tis an inspiring sight to see a large body of men conform to the will of "a chosen few."

Our drill grounds being smaller than when last we passed in review at Mobile, we in the lines had a better opportunity to view the movements. The three regiments, the First Louisiana, First Texas and First Alabama, which compose our brigade, formed in column of companies and after a few maneuvers marched in review past General Wheaton and Staff. Fully uniformed, and with rifles glistening in the sun, the men swung along to the quickening strains of an excellent band, utterly regardless of the fact that the heat was 100 in the shade, while clouds of moisture arose from the soaked earth, wherever the sand had not drank it up. On over the small open space, covered with a short scrubby growth of grass, we went, sounding like the far distant noise of a train. Now we strike the rocky coral formation and unconsciously my mind went back to dear old New Orleans and Canal street, with its surging tide of humanity hurrying along over its rough pavements, but on ahead a battalion has come to the palmettoes and as, with steady cadence they move along, a murmur as of surf breaking on a rock-bound coast greets my ear and brings me back to Miami just as our turn comes to "close interval."

Our popular battalion commander, Major Knapp, was highly complimented on the manner in which he handled his command.

During a short rest Col. Stevens took the different majors out before the line of recumbent boys in blue and gave them a short drill which we all enjoyed hugely. At the final charge our major's black charger brought him to the front amidst the ringing cheers of not only our battalion but the whole brigade.

"Art," as sometimes I catch myself calling Major Knapp, is a universal favorite of both rank and file. He has an indescribable personality different from anything I ever saw. On duty and off duty he is always an officer and a gentleman; but when off duty he

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"Art," as sometimes I catch myself calling Major Knapp, is a universal favorite of both rank and file. He has an indescribable personality different from anything I ever saw. On duty and off duty he is always an officer and a gentleman; but when off duty he mingles with the men, settling, if required, any question which may arise; and, with a charm all his own keeps the men in touch with him, and in doing so is weaving a chain 'twill be difficult to break, and if it could be left to a vote he would be made a brigadier-general before he earns the title on a field of battle. But he pays the penalty of being popular. An early morning visit to his tent the other day found him very sleepy and tired, and his muttered "had a swell time last night, Will," told the story of his presence at a grand ball at the Royal Palm the previous night.

It is reported here, and from good authority, that our days at this place are numbered. In fact, our quartermaster sergeant drew but five days' rations today, which, according to the past, means a removal at the expiration of that time. Our destination will be St. Augustine or Jacksonville.

In regard to the literature sent by Lake Charles friends, we have not derived any benefit of it thus far, as the Y. M. C. A. tent has not been ready for occupancy.

As for the tobacco sent by the Ladies War Relief Association, I will say that Major Knapp has a box full at his tent, and we all help ourselves. I had not thought to inquire where it come from

but suppose it is what they so kindly sent.

We have a young man in our tent whose voice is as the tone of some ancient harp and between "retreat" and "taps" our friend, (Ed. Pierce), carries us back on the wings of melody to scenes and dear ones far away.

Company G has a millionaire son on the roll; he is now on the sick list; money makes no difference here. Speaking of sickness, it is estimated that 8 per cent of the soldiers are in the hospitals; indeed it is rumored that complaint has been made to "powers that be" in Washington and that is the real cause of our removal. I must close lest you tire of my letter.

W. WILL PARRY,

### BARBECUE PREPARATIONS

COMMITTEE REPORTS EXCELLENT PROGRESS IN ITS WORK.

Provisions and Money and Location of Grounds Have Been Searched—Families of Veterans Welcome.

The members of the ways and means committee having in charge the preliminary arrangements for the forthcoming barbecue in honor of the Confederate veterans, met at the room of the Business League yesterday afternoon and from the various reports received the indications are that the day will be one of the memorable ones in Houston's future history. In the absence of Chairman C. A. Holt, Colonel P. H. Fall was called to the chair and he made a splendid presiding officer. For the committee on meats, Colonel Richard Cooke reported that there would be no difficulty in obtaining a supply sufficient to meet the requirements of the barbecue.

Mrs. H. T. Rue, acting for the Woman's Relief Corps, reported that that organization was arranging to supply its quota of the food which the ladies' organizations are asked to secure. Mrs. J. V. Lea for the R. E. Lee chapter, and Mrs. H. W. Harris for the O. M. Roberts chapter, United Daughters of the Confederacy, reported that these orders had raised their quota of the supplies and Mrs. J. J. McKeever made a similar report for the San Jacinto chapter, Daughters of the Republic. All supplies secured by the ladies will be left at the Business League room on Saturday, May 16, to be transported to the barbecue grounds.

For the grounds committee Mr. D. D. Bryan stated that they had selected the plot of ground and beautiful lawn between the Wells-Fargo depot and the Houston Infirmary, as it relieved all fear regarding the movement of trains and did not call for a crossing of the tracks. The Central railroad has agreed to furnish a canvas covering for the tables.

For the finance committee Captain D. D. be no un-

## THE JAPANESE COLONY.

### Dr. S. A. Knapp Says Its Presence in Texas Won't Affect Labor.

Dr. S. A. Knapp, the special agent of the United States agricultural department, rice expert and president of the Rice Association of America, was in the city yesterday, having just returned from a tour of Mississippi and Tennessee with Secretary of Agriculture Wilson. The cabinet officer and Dr. Knapp are warm personal friends and the doctor was summoned to Mississippi a few days ago to join the touring party.

Dr. Knapp reports a most delightful trip and the crop prospects very encouraging. He said that Secretary Wilson is desirous of coming South, and would have come from Tennessee, but Southern agriculturists have prevailed upon him to come later in the season, because Southern agriculture can not be seen at its best at this time of the year. The secretary wants to see the rice fields and to study the cotton crop and the boll weevil. In deference to the wishes of these Southern agriculturists Secretary Wilson has postponed his Texas visit until May. He will probably get here in the latter part of next month. A number of chiefs of agricultural bureaus will be here next month. Among them are: Dr. Galloway, Prof. Spillman and Prof. Pieters.

Speaking about rice matters, Dr. Knapp said that he thinks the idea of erecting rice elevators through the grain belt is a very good one.

"A great many rice people think so," said Dr. Knapp in the Rice hotel yesterday.

"John Green, manager of the Crowley rice mill, and several other prominent rice men have advocated it.

"As for any danger of spoliation in storing, rice has not as great a tendency to heat as wheat. It does not lie as solidly and it is protected by a dry husk. I think it can be done, because I have seen it done in the greatest rice country in the world—Burmah. They do not have elevators in Burmah, but they have a process of storing very much on the same order. They have much greater mills than we have here. I was in one plant there that milled 6000 barrels of rice a day."

Speaking about the settlement of Japanese in the rice belt of Texas, which has already taken place in a small way at Port Lavaca, Dr. Knapp said that there was no need for fear of Japanese competition so far as we are concerned. The Japanese is smart. He raises the price of his labor as soon as he arrives in this country.

"I'll give you an example of that," said Dr. Knapp. "Mr. Fuzima, who was at the head of the Japanese colony at Lavaca, recently wrote to me, asking whether I would like to have two Japanese laborers for the experiment farm. I asked the Japanese how much they wanted. They said \$40 a month.

"That shows that we have nothing to fear from Japanese labor competition. The Japanese are greater utilitarians than we are. In Japan every product is utilized, and there is no reason why it should not be in this country. In Japan the bags in which rice is packed is made of rice straw, and they hold 133 pounds. When the bags are no longer of use they are manufactured into paper. In Japan there is none of the extravagance that exists here."

### THE VALUATION QUESTION WITH THE FEDERATION

CITY'S WITNESSES SAY WATER CO. VALUES REAL ESTATE TOO HIGH.

STENOGRAPHERS WILL BE REPRESENTED IN LABOR COUNCIL.

Matter of the Present Mill, Valued at \$250 Very Close

### TURNED STATES EVIDENCE

TWO OF THE SUSPECTED NEWSBOYS TOLD THEIR STORY.

The Police Courts Are Kept Busy by the Daily Grist of Petty Misdemeanors. An Inquest Held.

The four newsboys who were arrested last Sunday by Officer Harry Anderson on a charge of burglarizing the office of H. H. Taft on Saturday night, appeared before Judge Matthews yesterday afternoon for an examining trial.

Since their arrest last Sunday two of the boys have positively refused to talk. The other two, however, when subjected to a severe "sweat box" questioning seemed anxious to clear themselves at the expense of the others.

Frank Caulk and Johnnie Gilmore made a complete confession of the affair to the detectives, but denied their own guilt. Detectives Murphy and Kessler investigated and secured evidence sufficient to implicate the other boys in the burglary. Judge Matthews bound Jones Breeding and Robert Schelz over to the criminal district court in the sum of \$200 each. The other two boys who turned State's evidence were released.

Detectives Murphy and Kessler yesterday afternoon arrested John Calhoun on a warrant from Judge Matthews' court charging burglary. It is alleged that Calhoun, who works at the residence of Dr. Max Urwitz at the corner of Fannin street and Preston avenue, entered the room of Louis Christesson at that place and appropriated a coat and vest not his own. The property was recovered by the detectives.

The preliminary hearing will take place today in Judge Matthews' court.

Alice Cayton, well known in police circles in this city, was arrested yesterday morning by Detectives Smith and Lee on a charge of burglary. About a

# PROF. KNAPP IN CHINA.

## AN INTERESTING LETTER FROM THE ORIENT.

### Peculiar Customs of a Peculiar People.

In some respects Shanghai is one of the most peculiar cities on the globe.

When it became an open port, foreign nations obtained control of lands adjacent to the old city by concession of the Chinese government, and have built cities upon those tracts.

There is the old city of Shanghai, as medieval and distinctively Chinese as it was before the foreigners touched the shores of China.

There is the French city where every thing is modeled after France. It has a French govern-

ment for a natural drain and sewer; in this the carriers walked and filled their buckets. This water is poured into large settling tanks and treated with alum, then it is supposed to be boiled.

No white man could live under such unsanitary conditions. These Chinese not only live, but thrive in filth.

A look through their markets showed that they ate almost every thing in the animal kingdom, whether it was killed for food or it died from disease or old age.

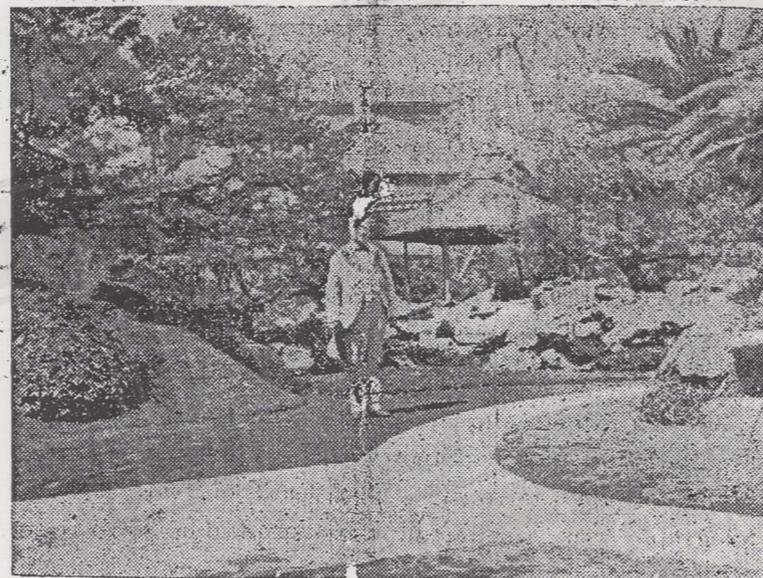
Probably the meat of an animal which died of tuberculosis is sold a little cheaper than ordinary meat, but at the reduced price it

Thirty hours from our start we reached Nankin, the old imperial city.

For some distance below Nankin we were able to get a good view of the country. The banks of the river are generally low and the country level, divided here and there by low mountain ranges.

The mountains are destitute of timber, but generally produce a coarse grass, which is cut off every year for fuel. The valleys

for two miles. It is less than twelve feet wide and is obstructed on each side for an average of three feet by projecting counters, piles of goods or wares and a great variety of fruit stands, leaving only six feet for the travel of men, sedan chairs, wheelbarrows, the water carriers, the freight carriers, the city scavengers and all the innumerable traffic of a city more than twice as populous as New Orleans. It requires some lively dodging to



Prof. Knapp in Consul Lyon's Garden in Kobe, China.

look like old inland lakes. The annual July flood this year was the highest known for many years and although the river has fallen six to eight feet it is still over vast tracts of land. There are practically no levees. It is

keep from being hit by a slop bucket, struck by a long pole on some man's shoulder or poked by one rail of a sedan chair, and while we are alert to escape these there is danger of falling over a pig, being tripped by a dog or stepping on the bare feet of some

We came to a place where a street opened to the left and facing the end of the street was a shop. This is a sign of bad luck to the occupants of the shop as spooks may come up the open street and attack it. It is understood that a stone from Tai mountain, placed ready to be thrown at the spooks, will keep them away, but it costs something to get a stone and inasmuch as spooks can not look behind any thing to verify a statement, it answers just as well to say a stone is there; so on the front of the counter opposite the open street was nailed a sign which read: "Here is a stone from Tai mountain; come on if you dare," intimating that every spook which ventured to come would get a rock in his head.

Our attention was now called to some rice. The man said it was extra good and very cheap. It was a fair quality of No. 2 rice. It could be bought for one cent (gold) per pound. Possibly the

formation about the several provinces of China.

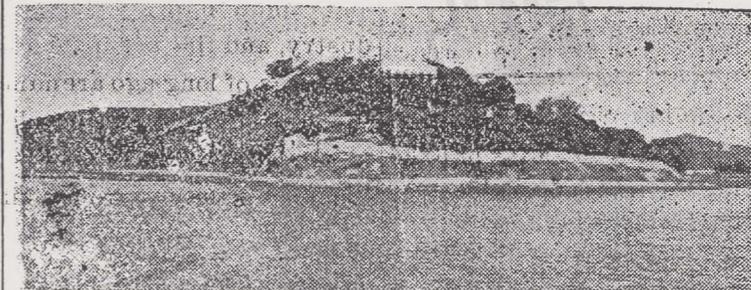
Dr. and Mrs. Stuart and their attractive children made my stay in Nankin exceedingly pleasant.

On the first day Mr. Meigs was my guide to look at the country, and the Ming tomb.

Dr. Stuart furnished us sedan chairs. Before the coolies lifted me to their shoulders Mr. Meigs said, "If you want to stop at any time say, 'Funge Tung.'"

Our line of march is commenced; we wind through the city; every thing worth preserving is walled in with a brick or stone wall, generally about seven feet high. Where there are no walls it is certain there is nothing worth stealing. We file past the vicarage residence, surrounded by a wall about twenty feet high and inclosing some ten acres of land.

Soon we come to the wall of an inner city where the Emperor used to reside but now occupied by Manchus. Some twelve thousand



M. E. Medical College at Wu Hu.

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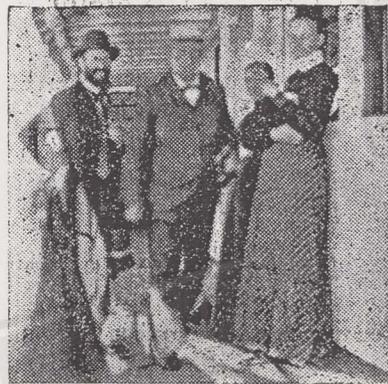
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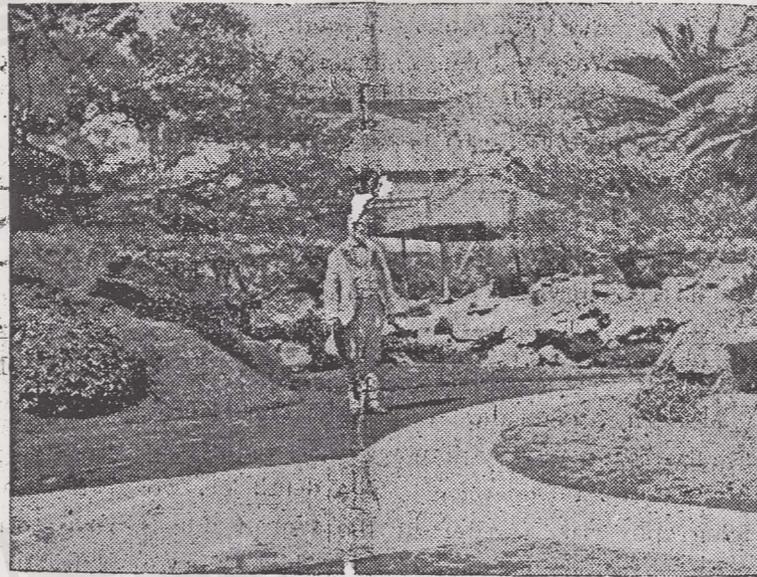
A look through their markets showed that they ate almost every thing in the animal kingdom, whether it was killed for food or it died from disease or old age.

Probably the meat of an animal which died of tuberculosis is sold a little cheaper than ordinary meat, but at the reduced price it sells readily. They generally strangle the animals they kill so as to save all the blood.

In one shop I saw some baskets filled with small latticed boxes, from which issued familiar sounds: on inquiry I learned that these were boxes of crickets for sale to the people. To have a chirping cricket in the house is thought to bring good luck.

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look like old inland lakes. The annual July flood this year was the highest known for many years and although the river has fallen six to eight feet it is still over vast tracts of land. There are practically no levees. It is estimated that one million people have been made destitute by the flood; but this thing has been going on for centuries and centuries. It never occurs to Chinese officials that any thing should be done to help the people. The idle millions might build immense levees and hold the Yangtse within its banks, if there was any government worthy the name.

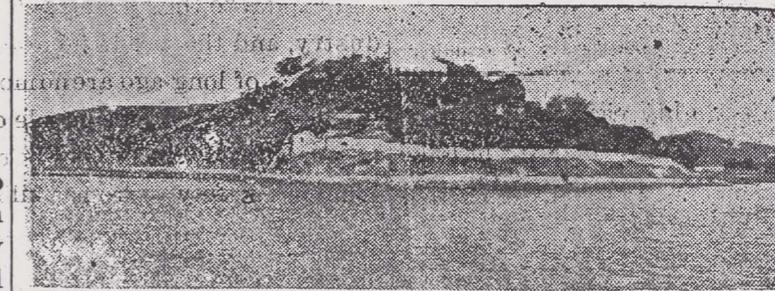
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keep from being hit by a slop bucket, struck by a long pole on some man's shoulder or poked by one rail of a sedan chair, and while we are alert to escape these there is danger of falling over a pig, being tripped by a dog or stepping on the bare feet of some little nude China boy playing in the crowded street. Men are constantly calling out in Chinese Look out! Here I come! Out of the road! etc.

We are beginning to get along fairly well when the street is blocked by the governor of the city in a sedan chair. In front of him are four guards and following him is the sedan chair of

street and attack it. It is understood that a stone from Tai mountain, placed ready to be thrown at the spooks, will keep them away, but it costs something to get a stone and inasmuch as spooks can not look behind any thing to verify a statement, it answers just as well to say a stone is there; so on the front of the counter opposite the open street was nailed a sign which read: "Here is a stone from Tai mountain; come on if you dare," intimating that every spook which ventured to come would get a rock in his head.

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next man met would want three cents for a poorer article. There are no fixed prices in China.

At one shop I saw a stone ring such as Chinese women wear on their wrists. The price was thirty cents. I offered ten and got it—probably paid fifty per cent too much.

The following day Dr. Gillison accompanied us to Wu Chang to see the city and call on Dr. Borland.

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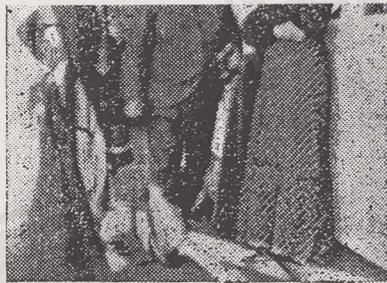
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Soon we come to the wall of an inner city where the Emperor used to reside but now occupied by Manchus. Some twelve thous-

and of these reside here and are pensioned by the government.

The Manchus are taller and better formed than the Chinese; they dress in a far more becoming way and they never bind their women's feet. They belong to the family of the Emperor and enjoy special privileges.

The old palace and nearly all the inner city was destroyed during the Taiping rebellion.



"Caught by my friend as I walked on deck of steamer."

ment, post office and board of trade; the French language is spoken it is a small France.

There is an English city and an American city—both large and attractive cities—which are governed jointly and in a very democratic way. All important measures being referred to the electors.

There is also a German city or a place for one, with scarcely any improvement as yet.

If one is going about the English or American cities, and finds it necessary to go into the French portion, he is stopped at the bridge, unless his jinrikisha boy has a French license.

On one occasion we took pains to inquire of our jinrikisha boys before starting if they had French license. They assured us that they had, but when we came to the bridge one of them rushed up to another jinrikisha boy, borrowed his coat and sulkey, leaving his own. In this way he beat the French license. The coat and jinrikisha have the number of the license on them.

One forenoon we visited the Chinese City with Mr. Bitten, a resident English Missionary as guide and interpreter.

We passed along one of the main streets. It was seventy-

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A little further on we come to one of their famous tea houses. The location is most appropriately chosen. It stands in the middle of a pond of water, green, steaming and unsavory. A bridge connects the tea house with the street.

My principal object in visiting this portion of China was to go up the Yangtse river about 600 miles to Han Kow, the leading city of central China.

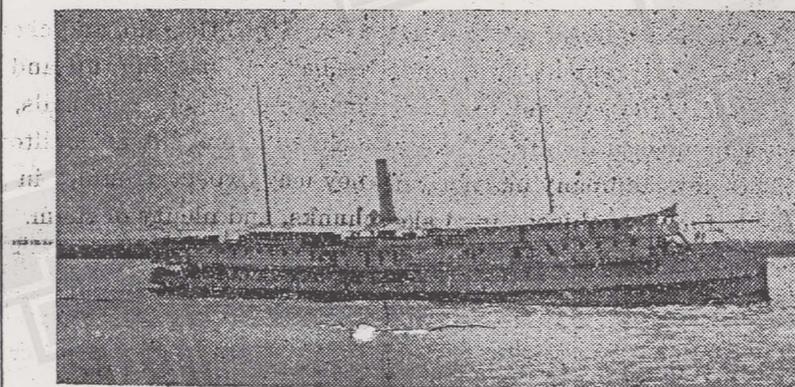
On September 11, we boarded the steamer Poyang of the China Navigation Company—a very good, twin screw steamer, mainly for freight but with accommodations for about fifteen first class passengers and one of the finest, most genial, all-around captains that ever walked a deck. On our American maps it looks as if Shanghai was on the Yangtse, but it is not: it is on a tributary, and ten miles from the mouth. The two rivers unite at the mouth



Tea House Chinese City, Shang-

ing on for centuries and centuries. It never occurs to Chinese officials that any thing should be done to help the people. The idle millions might build immense levees and hold the Yangtse within its banks, if there was any government worthy the name.

On the 14th we reach Kinkiang, where the first great confluents pour their waters into the Yangtse through the Poyang lake. For some distance before the junction it was noted that on the south side of the river the water is clear and on the north it is muddy. At Kinkiang we parted with Mr. and Mrs. Nich-



Steamer on the Yangtse river.

ols, fellow travelers from Kobe, Japan. Mr. Nichols is the presiding elder in the M. E. church over the Nan Chang district and a man exceedingly well informed on Chinese matters. On the 15th we arrived at HanKow—four days and six hours going 600 miles—six miles an hour, but this included stops and steaming against a strong six mile current. The captain of the steamer kindly offered to allow us to retain our state rooms, while at HanKow, as preferable to going to

constantly calling out in Chinese Look out! Here I come! Out of the road! etc.

We are beginning to get along fairly well when the street is blocked by the governor of the city in a sedan chair. In front of him are four guards and following him is the sedan chair of his secretary and bringing up the rear are eight men in livery with sugar loaf hats about fifteen inches tall. The only way is to step into a store till the procession passes.

About half the light is cut off the streets by mats stretched from house top to house top.

The stores on each side are

mere shops—ten, fifteen or twenty feet square—completely open towards the street.

Meat stands, fruit stalls, work shops and stores are indiscriminately arranged.

There are about as many clerks as things for sale. It appears to require as many as six clerks to sell one handful of nuts.

One store looked a little more promising than the others. "Just look at that sign," said Mr. Sparham. I looked, but saw nothing special. "It reads as

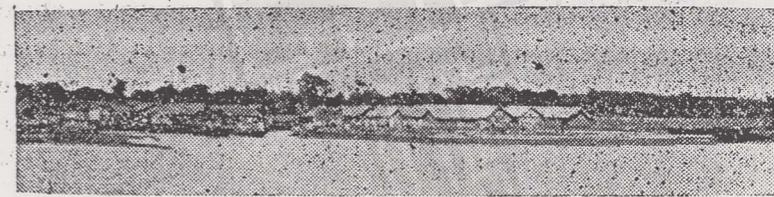
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The following day Dr. Gillison accompanied us to Wu Chang to see the city and call on Dr. Borland.

Wu Chang is much like Han Kow, possibly a little dirtier and has more pigs.

The viceroy resides here. It is a scattered city, divided by ranges of hills and it is unaccountable why Chinese houses have not been built on the hills, instead of in the sultry, crowded valleys. Wu Chang is surrounded by an immense wall, some sixty feet high and in good repair. All the large cities of the Yangtse valley are surrounded by walls.

We crossed the Yangtse, one mile wide at this point, in a small boat, called a sampan. A steam



HanKow, China, 600 miles up the Yangtse.

ferry was started between Han Kow and Wu Chang five days previous to our visit, but no one appeared to know much about it. We asked our boatman in regard to it and his reply was, "It goes very quick." On my return trip down the Yangtse, I stopped at Nankin, the old imperial capital. As we drew up to the landing I began to wonder how I was to

better formed than the Chinese they dress in a far more becoming way and they never bind the women's feet. They belong to the family of the Emperor and enjoy special privileges.

The old palace and nearly the inner city was destroyed during the Taiping rebellion.

Through the inner city are one of the gates of the main wall and we come to an undulating well grassed, open country. The ground appears very rough. These are graves. The whole country is covered with the little mounds which Buddhists build over the dead. It looks as if digging had been the main business of the Chinese for thousands of years.

In about one mile we enter a narrow avenue bordered by enormous stone animals, each animal cut from a single stone. To make the elephants require a stone 12 to 15 feet cube. How did they transport it? The animal

cease with the horse; then there are four soldiers clad in armor then four priests.

We come now to the first elevation and temple; descending about six feet we enter the walled court then the inner court at the further end of which is the supposed tomb of the great Ming Emperor. Hung Wu, who reigned from 1368 to 1399. As this was constructed before his death it must be over 500 years

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One forenoon we visited the Chinese City with Mr. Bitten, a resident English Missionary as guide and interpreter.

We passed along one of the main streets. It was seventy-eight feet wide with shops and stores on each side. Further on, the street was barred by doors. Then we went over a few steps and turned sharply to the left into a narrower street; finally we came to a street thirty feet broad with an open sewer about eight feet wide and six feet deep in the center. Into this the filth of the city is poured to be cleaned by the action of the rising tide. The day was warm and the stench almost unbearable. Further on, water carriers were distributing water to the houses. I was curious to see from what source they obtained the water and we followed the carriers till we came to a sluggish creek which answered

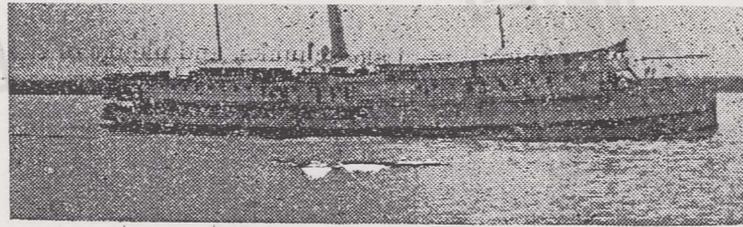
good, twin screw steamer, mainly for freight but with accommodations for about fifteen first class passengers and one of the finest, most genial, all-around captains that ever walked a deck. On our American maps it looks as if Shanghai was on the Yangtse, but it is not: it is on a tributary, and ten miles from the mouth. The two rivers unite at the mouth



Tea House Chinese City, Shanghai.

of the Yangtse. Our steamer slipped its moorings about half past four on the morning of the 12th, and by six we were well up in the Yangtse or somewhere, it looked like the ocean except for the muddy water and the swift current; banks scarcely discernable in the distance; ten Mississippi rivers in one.

Probably the river is not over ten miles wide but, it looks wider. Eighty miles up the river we reach the first great bluffs. The river narrows here to less than two miles wide, and the bluffs are strongly fortified. Above the bluffs are the Chinese armor-clads, ready to run if the enemy passes the forts.



Steamer on the Yangtse river.

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It is difficult to obtain good interpreters in the interior of China, as almost every province speaks a different language. While all are Chinese and somewhat similar they differ as much as Italian and Spanish.

Fortunately we took a letter to Dr. John, who has resided at Hankow for forty years. He received us with great cordiality gave much valuable information and aided us in securing interpreters. The Rev. Sparham offered to be our guide through Hankow.

We entered the main business street at the concession (portion owned by foreigners) and traversed the Broadway of Hankow

mere shops—ten, fifteen or twenty feet square—completely open towards the street.

Meat stands, fruit stalls, work shops and stores are indiscriminately arranged.

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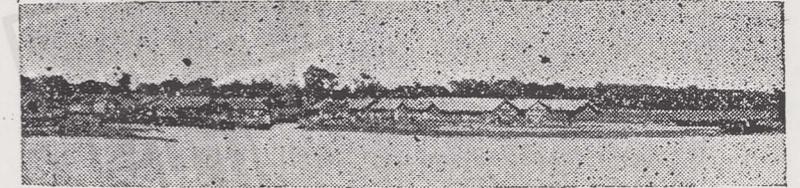
One store looked a little more promising than the others. "Just look at that sign," said Mr. Sparham. I looked, but saw nothing special. "It reads as follows," said he, "The price is made under your eye by a single word. The morning and the evening are not the same." That is, "We have no established price, but fix the price at the time of the trade. If you buy in the evening at our price do not complain that you bought for less in the morning. The morning and the evening are different times."

Soon we came to a plain wall used for official proclamations. One had just been posted by the magistrate. It read: "As this is the season of prayer for rain, the killing of pigs is hereby prohibited."

The sign before the next store read: "All the articles in this store are hand made and therefore more durable."

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HanKow, China, 600 miles up the Yangtse.

ferry was started between HanKow and Wu Chang five days previous to our visit, but no one appeared to know much about it. We asked our boatman in regard to it and his reply was, "It goes very quick." On my return trip down the Yangtse, I stopped at Nankin, the old imperial capital. As we drew up to the landing I began to wonder how I was to reach my friends within the city, four miles distant, but as the boat was made fast I saw some one shaking his hat and recognized the genial countenance of Rev. F. E. Meigs of the Christian church. Under his guidance I had no difficulty in entering the city and finding the residence of Dr. Stuart, President of the Methodist University of NanKin, where I was most hospitably entertained.

Dr and Mrs. Stuart came from Dallas county, Iowa.

The only chance to visit a city like Nankin is to stop with a missionary. There are no hotels and, owing to the fact that each province speaks a different dialect, there is no one to interpret, except missionaries. Missionaries are the only foreigners that can give a traveler any accurate in-

cess with the horse; then there are four soldiers clad in armor; then four priests.

We come now to the first elevation and temple; descending about six feet we enter the woman's court then the inner court at the further end of which is the supposed tomb of the great Ming Empror. Hung Wu, who who reigned from 1368 to 1399. As this was constructed before his death it must be over 500 years old. In his day the entire distance from the wall to the tomb was an immense park; now it is a grave yard, but used for grazing horses, cattle and sheep.

When we came to a flock of flat tailed sheep I said, "Funge Tung" My chair was set on the ground and I stepped out, avoiding to step over the ends of the shafts as that would be a bad sign. The flat tailed sheep are a peculiar variety of which I had heard, but had never seen before.

The herder said they were worth from 6 to 10 dollars (silver) each. It was nearly dark when we returned to Dr. Stuart's.

On the following day I visited the schools and hospitals and in the evening a reception was held for me at Dr. Stuart's and I had the pleasure of meeting most of the English and American residents of Nankin, including Mr. Martin, the American consul. On the following day I took steamer for Shanghai.

## AN INTERESTING LETTER FROM THE ORIENT.

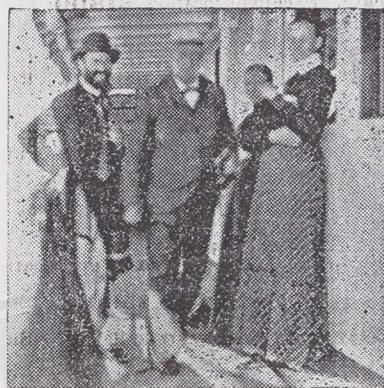
### Peculiar Customs of a Peculiar People.

In some respects Shanghai is one of the most peculiar cities on the globe.

When it became an open port, foreign nations obtained control of lands adjacent to the old city by concession of the Chinese government, and have built cities upon those tracts.

There is the old city of Shanghai, as medieval and distinctively Chinese as it was before the foreigners touched the shores of China.

There is the French city where every thing is modeled after France. It has a French govern-



ment for a natural drain and sewer; into this the carriers walked and filled their buckets. This water is poured into large settling tanks and treated with alum, then it is supposed to be boiled.

No white man could live under such unsanitary conditions. These Chinese not only live, but thrive in filth.

A look through their markets showed that they ate almost every thing in the animal kingdom, whether it was killed for food or it died from disease or old age.

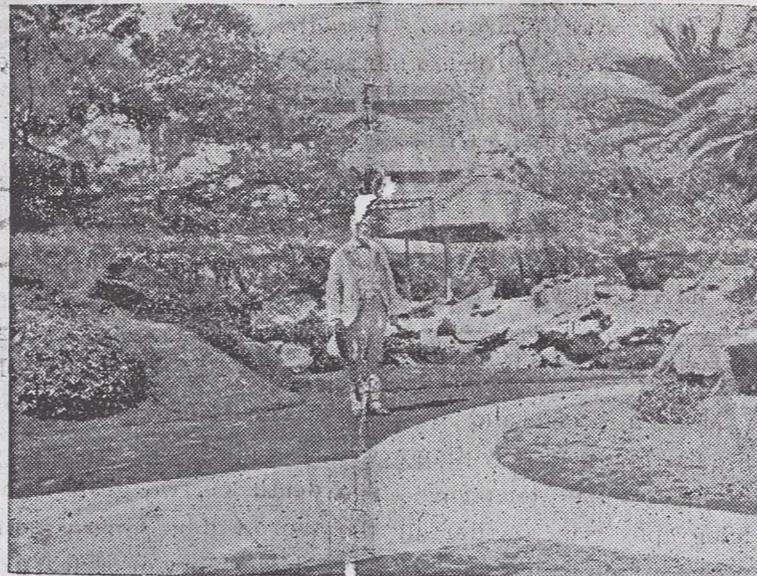
Probably the meat of an animal which died of tuberculosis is sold a little cheaper than ordinary meat, but at the reduced price it sells readily. They generally strangle the animals they kill so as to save all the blood.

In one shop I saw some baskets filled with small latticed boxes, from which issued familiar sounds: on inquiry I learned that these were boxes of crickets for sale to the people. To have a chirping cricket in the house is thought to bring good luck.

A little further on we come to

of the river are generally low and the country level, divided here and there by low mountain ranges.

The mountains are destitute of timber, but generally produce a coarse grass, which is cut off every year for fuel. The valleys



Prof. Knapp in Consul Lyon's Garden in Kobe, China.

look like old inland lakes. The annual July flood this year was the highest known for many years and although the river has fallen six to eight feet it is still over vast tracts of land. There are practically no levees. It is estimated that one million people have been made destitute by the flood; but this thing has been going on for centuries and centuries. It never occurs to Chinese officials that any thing should be done to help the people. The idle millions might build immense levees and hold the Yangtse within its banks, if there was any government worthy the name.

On the 14th we reach Kin-

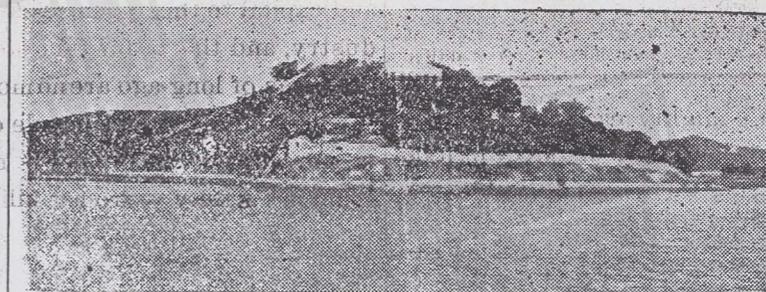
leaving only six feet for the travel of men, sedan chairs, wheel barrows, the water carriers, the freight carriers, the city scavengers and all the innumerable traffic of a city more than twice as populous as New Orleans. It requires some lively dodging to

keep from being hit by a slop bucket, struck by a long pole on some man's shoulder or poked by one rail of a sedan chair, and while we are alert to escape these there is danger of falling over a pig, being tripped by a dog or stepping on the bare feet of some little nude China boy playing in the crowded street. Men are constantly calling out in Chinese Look out! Here I come! Out of the road! etc.

We are beginning to get along fairly well when the street is blocked by the governor of the city in a sedan chair. In front of him are four guards and following him is the sedan chair of his secretary and bringing up

street and attack it. It is understood that a stone from Tai mountain, placed ready to be thrown at the spooks, will keep them away, but it costs something to get a stone and inasmuch as spooks can not look behind any thing to verify a statement, it answers just as well to say a stone is there; so on the front of the counter opposite the open street was nailed a sign which read: "Here is a stone from Tai mountain; come on if you dare," intimating that every spook which ventured to come would get a rock in his head.

Our attention was now called to some rice. The man said it was extra good and very cheap. It was a fair quality of No. 2 rice. It could be bought for one cent (gold) per pound. Possibly the



M. E. Medical College at Wu Hu.

next man met would want three cents for a poorer article. There are no fixed prices in China.

At one shop I saw a stone ring such as Chinese women wear on their wrists. The price was thirty cents. I offered ten and got it—probably paid fifty per cent too much.

The following day Dr. Gillison accompanied us to Wu Chang to see the city and call on Dr. Borland.

was my guide to look at the country, and the Ming tomb.

Dr. Stuart furnished us sedan chairs. Before the coolies lifted me to their shoulders Mr. Meigs said, "If you want to stop at any time say, 'Funge Tung.'"

Our line of march is commenced; we wind through the city; every thing worth preserving is walled in with a brick or stone wall, generally about seven feet high. Where there are no walls it is certain there is nothing worth stealing. We file past the vicarage residence, surrounded by a wall about twenty feet high and inclosing some ten acres of land.

Soon we come to the wall of an inner city where the Emperor used to reside but now occupied by Manchus. Some twelve thous-

and of these reside here and are pensioned by the government.

The Manchus are taller and better formed than the Chinese; they dress in a far more becoming way and they never bind their women's feet. They belong to the family of the Emperor and enjoy special privileges.

The old palace and nearly all the inner city was destroyed during the Taiping rebellion.

Through the inner city and