

# The Government's Great Work For the Farmers.

By Henry Loomis Nelson.

It is not many years since the Department of Agriculture was a very small concern, but now it is in fact as in name a great and perhaps the most useful department of the government, while at its head is a member of the cabinet.

What does this department do for the farmer? Working in an unfrequented part of Washington, or out in the country in Maryland, or at the various experiment stations which are usually connected with agricultural colleges, are about 3000 people. Of the 2000 in Washington about one-

conditions of the soil and climate of his neighborhood, and of the crops which may be most profitably grown on his farm. The department makes



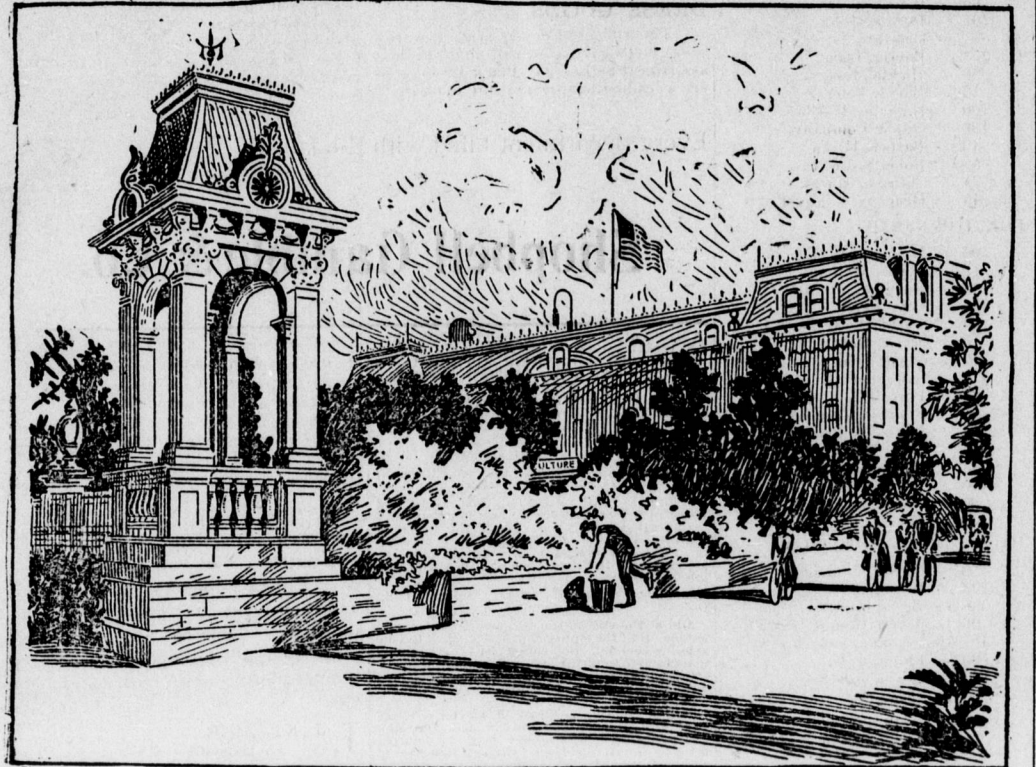
IN THE BOTANICAL GARDEN.

the necessary experiments for the farmer, saving him both time and money, and putting him that far ahead in the game which his father had to learn all about for himself. A distinguished economist told me not

usually grown here. It has thus been found that jute can profitably be raised in the South, and flax on Puget Sound. The department furnishes farmers with information as to the character of weeds sent by them for identification, and it issues warnings to State experiment stations and to local authorities of the presence of dangerous weeds in their localities. It also makes tests of seeds and publishes the information gained by the experiments. It spreads abroad information as to grasses, grains, poisonous plants, roots and fruits. It makes thorough examination of soils for agricultural purposes, ascertains their texture, and issues a bulletin showing graphically the differences in important types of land. The same bulletin "shows that most of our agricultural crops are adapted to soils of certain texture, differing greatly for the various crops." Bulletins are also issued showing the moisture maintained by these crops, and the

afterwards there was another appropriation of a like amount. Two years after that Congress appropriated \$2000. By 1857 the annual expenditure had reached \$75,000, but it fell again and then rose, but it did not exceed \$500,000 until 1885, and the occasion of the increase for that year was the establishment of the Bureau of Animal Industry. In 1888 the appropriation exceeded \$1,000,000, but in that year the Weather Bureau was transferred from the Signal Corps to the department. The Government is now spending about \$3,000,000 a year on its farmers, but included in this sum is about \$2,000,000 for the Weather Bureau, the Bureau of Animal Industry, and the experiment stations. These last perform a valuable service—perhaps the most valuable service rendered to agriculture by the department.

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MAIN BUILDING OF THE DEPARTMENT OF AGRICULTURE, WASHINGTON, D. C.

half are scientific men. There are two large bureaus, twenty-two divisions, offices, or surveys. Of these seven are administrative, eight technical, and seven are purely scientific. To these must be added the offices of the Weather Bureau, which include 154 observer stations, and fifty-two stations along the coast and on the Great Lakes. The Bureau of Animal Industry has 152 technical stations engaged in meat inspection and quarantine work, and three laboratories where the diseases of animals and their causes are investigated.

This article would be uninteresting and therefore worthless if I should



THE HYDROCYANIC GAS TREATMENT.

undertake to describe technically the work done by the department. I shall try to give the reader a general idea of what these practical and scientific men are doing for the country, because after a visit to the bureau in Washington I was led to read a good deal of its literature, and to look into the subject, and it struck me that the work is not only in every way worthy, but that its real value is not widely understood, has been laughed, or smiled into oblivion, perhaps on account of the jokes about the seeds and the "farmers" who distribute and receive them.

In the first place the department provides an opportunity to make

long ago that it was hardly possible to overestimate the good that the experiment stations had worked in the business of farming. It was this statement that put me on my inquiry. These experiment stations, by the way, receive money from the States—a little more than half as much as they receive from the general Government. As is to be expected, the farmers at first entertained a very contemptuous idea of the scientists in charge of the stations, but they are now coming to depend upon them, and to go to them for advice. Their confidence was first gained by the protection which they obtained from the stations against frauds and impositions in commercial fertilizers, and now the stations look after the farmers' interests in respect of nursery stock, dairy products, and feeding-stuffs, and aid them materially in fighting injurious insects. In addition to these police duties the men at the stations are engaged in making original investigations in agricultural problems, and the results are published in farmers' bulletins and in the form of pamphlets.

An idea of the work done by the whole department and of its value—for its work is well done—may be obtained by an enumeration of some of the subjects which have been investigated and on which publications have been issued. The division of vegetable physiology and pathology has studied the disease of shade and ornamental trees, and has instructed those who plant and care for such trees in the causes of and remedies for the diseases. It has taught fruit growers how to care for and improve the orange, pineapple and other fruits. It has discovered the secret of propagating the fig. It has found remedies for

differences between adjacent soils. The department tells the farmer the character of his land, the kind of crop best adapted to it and to the climate, is constantly experimenting to discover new crops for him, furnishes him with seeds, tells him the nature of the enemies that will attack his crops, warns him of their actual presence, and instructs him as to the remedies to be applied. It also separates his diseased cattle from his healthy cattle; stamps the latter so that they bring a higher price abroad than competing cattle bring; informs him of the character of the foreign demand for farm products, and advises him as to the best manner of packing



THE SPRAYING-MACHINE.

his fruit for shipment. The value of the work of the forestry division cannot be overestimated. It has done much to stimulate a widespread interest in the subject of forest preservation, and has accomplished an admirable work in decreasing the number of forest fires. The department also instructs the farmer in the art of making good roads, and excites a desire for them by spreading abroad a knowledge of their great economic value to all who have heavy loads to haul to market or the railway station.

This work is done by the Government for the benefit of those who annually provide from sixty-five to seventy per cent. of the materials for our export trade, and as if to emphasize the fact that the expenditure of the \$3,000,000 is partly in aid of commerce, the Weather Bureau, whose warnings of the approach of coast storms have saved millions of dollars' worth of property and thousands of lives, is attached to the Department of Agriculture. There is no doubt that the American farmer is the most intelligent farmer in the world. Statistics of farm mortgages and farm holdings show that he is the most prosperous, and his Government does more than any other Government to help its agriculturist to be a successful, wise, and profitable cultivator, and to point out to him the most advantageous methods of distribution.

For all the work which this department has done the government has thus far extended less than \$32,000,000. The first appropriation for the agricultural department was of \$1000, and was made in 1839. Three years

## CHICAGO HAS TWO WILD DOGS

Said to Be the Only Ones on This Continent—Natives of Australia.

Cautiously creeping from their darkened kennels to snatch a bit of food from the floor of the iron cages when no one is near, and darting back like a flash at every strange noise and sight, two dingo dogs, or wild dogs of Australia, have begun the daily routine of their career behind bars in the Lincoln Park Zoo. They are the only two dingo dogs on the American continent, and were shipped directly from Australia.

Naturalists term the dingo the king of the dog family. While no larger than a medium-sized shepherd they are the terror of Australia, possessing far more cunning than the fox and being more destructive than the wolf. They have been considered incapable of domestication, but of late years several instances are known where they have been tamed. Until recently the dingo was thought to be a domestic dog returned to the savage state, but in the latest researches of McCoy and Nehring fossil remains of the canine have been found in the pleocene and quaternary strata of Victoria, which proves the animal to be a genuine wolf. He immigrated to Australia through the country uniting Australia and southeastern Asia at a certain period of the pleocene epoch.

The dingo inhabits the plains and the dense forests of Australia. Like the fox, he hides in the daytime and prowls at night, threatening all Australian quadrupeds. He attacks every



DINGO, OR WILD DOGS OF AUSTRALIA.

animal indigenous to Australia; his favorite prey being sheep and kangaroos. Prof. C. W. McCurren, head animal keeper, prizes the dogs as among the most valuable possessions of the zoo.—Chicago Record.

## Russian Marriage Custom.

When a Russian Princess marries, after the wedding dinner and ball it is the privilege of the marshals and ministers to see the couple to the nuptial chamber. And after a becoming interval it is the duty of the prince to come out and distribute precious morsels of his partner's garters to the haughty and exclusive crowd who have been waiting. Each little bit bears the royal crown and the princess's initial in embroidery.

## Brace For Berry-Pickers.

When a small boy complains that his back aches his elders are apt to remark that little boys do not have backs, but Edgar C. Mendenhall, seems to have come to the conclusion that even grown people have backs



APPLIANCE TO STRENGTHEN THE BACK.

to ache when compelled to maintain a stooping position for several hours at a time. In the illustration we show his new back brace for the use of cotton-pickers, berry-pickers, etc. The entire device is light in construction and responds quickly to the different movements of the body, and does not produce an uncomfortable sensation when applied to or tend to heat the body.

A complete set of Mafeking siege postage stamps has been sold at a London auction for \$180 and two sets of Mafeking paper money for \$110.

## DR. TALMAGE'S SERMON.

SUNDAY'S DISCOURSE BY THE NOTED DIVINE.

Subject: Christ's Character—His Earthly Life—His Beautiful Example—Practical Self-Sacrifice and Humility and Help Bear Burdens of Others

WASHINGTON, D. C.—In this sermon, which Dr. Talmage sends from Paris, he analyzes the character of the Saviour, and urges all Christians to exercise the qualities which were conspicuous in Christ's earthly life. The text is Romans viii, 9: "Now, if any man has not the spirit of Christ, he is none of His."

There is nothing more desirable than a pleasant disposition. Without it we cannot be happy ourselves or make others happy. When we have lost our temper or become impatient under some light cross, we suddenly awaken to new appreciation of the beauty of nature. We wish we had been born with self-balance, we envy those people who bear themselves through life without any perturbation, and we flatter ourselves that, however little self-control we may now have, the time will come, under the process of years, when we will be mellowed and softened, and the wrong things which are in us now will then be all right, forgetful of the fact that an evil habit in our nature will grow into larger proportions, and that an iniquity not corrected will become the grandfather of whole generations of iniquities. So that people without the grace of God in the struggle and amid the annoyances and exasperations of life are apt to become worse instead of better.

Now, the trouble is that we have a theory abroad in the world that a man's disposition cannot be changed. A man says, "I am irascible in temper, and I can't help it." Another man says, "I am revengeful naturally, and I can't help it." A man says, "I am impulsive, and I can't help it." And he tells the truth. No man can correct his disposition. I never knew a man by force of resolution to change his treatment, but by His grace God can take away that which is wrong and put in that which is right, and I know and you know people who, since their conversion, are just the opposite of what they used to be. In other words, we may, by the spirit of God, have the disposition of Jesus Christ implanted in our disposition, and we must have it done or we will never see heaven. "If any man have not the disposition of Jesus Christ, he is none of His."

In the first place, the spirit of Christ was a spirit of gentleness. Sometimes He made wrathful utterance against Pharisees and hypocrites, but the most of His words were kind and gentle and loving and defensive and attractive. When we consider the fact that He was omnipotent, and could have torn to pieces His assailants, the wonder is greater. We often hear the persecution and abuse of the world because we cannot help it. Christ endured it when He could have healed it, little children who always shy off at a rough man rushed into His presence and clambered on Him until the people begged the mothers to take them away. Invalids so sore with wounds that they could not bear to have any one come near them begged Christ just to put His hand upon the wound and soothe it. The mother with the sickest child was willing to put the little one in Christ's arms. Self-righteous people rushed into His presence with a woman of debased character and said, "Now, annihilate her, blast her, kill her." Jesus looked at her and saw she was sorry and repentant, and He looked at them, and He saw they were proud and arrogant and malignant, and He said, "Let him that is without sin cast the first stone at her." A blind man sat by the roadside making a great ado about his lack of vision. They told him to hush up and not bother the Master. Christ stooped to him and said, "What wilt thou that I do unto thee?" Gentleness of voice, gentleness of manner, gentleness of life.

We all admire it whether we have any of it or not. Just as the rough mountain bluff and the scarred crag love to look down into the calm lake at their feet and as the stormiest winter loves to merge into the sunshiny spring, so the most precipitate and impulsive and irascible nature loves to think of the gentleness of Christ. How little we have of it! How little patience in treating with enemies! We have so little of the gentleness of Christ we are not fit for Christian work half the time. We do not know how to comfort the bereft or to encourage the disheartened or to take care of the poor. Even our voice of sympathy is on the wrong pitch.

My sister had her arm put out of joint, and we were in the country, and the neighbors came in, and they were all sympathetic and they held out their hands and pulled and pulled mightily until the anguish was intolerable, but the arm did not go to its place. Then the old country doctor was sent for, and he came in, and with one touch it was all right. He knew just where to put his finger and just how to touch the bone. We go out to our Christian work with too rough a hand and too unsympathetic a manner, and we fail in our work, while some Christian, in the gentleness of Christ, comes along, put his hand of sympathy on the sore spot, and the torn ligaments are healed, and the dislocated bones are rejoined. Oh, for this gentleness of Christ!

The dew of one summer night will accomplish more good than fifty Caribbean whirlwinds. How important it is that in going forth to serve Christ we have something of His gentleness! Is that the way we bear ourselves when we are assaulted? The rule is an eye for an eye, a tooth for a tooth, retort for retort, sarcasm for sarcasm. Give him as much as he sends! After awhile you look up into the face of Christ, and you see His gentleness, and you say, "Well, now, I must do differently." Then your proud heart says, "Now you have your enemy in a corner. You will never get him in a corner again. Chastise him and then let him go." So we postpone the gentleness of Christ.

Did you ever know any difficulty to be healed by acerbity or hypercriticism? About forty-five years ago the Presbyterian Church was split into the new school and the old school. The chasm got wider and wider. The most outrageous personalities were indulged in. Good men on one side and atheistical good men on the other side. Wider and wider the chasm got until after awhile some good people tried another tack, and they began to explain away the difficulties, and soon all the differences were healed, and at Pittsburgh they shook hands and are one now to this day.

You say to a man with whom you had a falling out, "I despise you." He says, "I can't bear the sight of you." You say to him, "I never want you to come to my house again." He says, "If you come to my house again, I'll kick you out." You say, "I'll put you down." "Oh, no," he says, "I'll put you down." But some day the spirit of Christ comes into you and you go over and say, "My brother, give me your hand; time is short and eternity is near, and we can't afford to quarrel. Now let bygones be bygones and let us act like Christians." It is all settled. How? By the gentleness of Christ.

Did you ever know a drunkard reclaimed by mimicry of his staggering steps, his thick tongue or his hiccup? No. You only madden his brain. But you go to him and let him know you appreciate what an awful struggle he has with the evil habit and you let him know that you have been acquainted with people who were down in the same depths who, by the grace of God, have been rescued. He hears your voice, he responds to that sym-

pathy, and he is saved. You cannot scold the world into anything better. The stormiest wind comes from its hiding place and says, "I will arouse this sea," and it blows upon the sea. Half of the sea is aroused or a fourth of the sea is aroused, yet not the entire Atlantic. But after awhile the moon comes out calm and placid. It shines upon the sea, and the ocean begins to lift. It embraces all the highlands, the beach is all covered. The heart throb of one world beating against the heart throb of another world. The storm could not rouse the whole Atlantic; the moon lifted it. "And I," said Christ, "if I be lifted up will draw all men unto Me."

Christ's disposition was also one of self-sacrifice. No young man ever started out with so bright a prospect as Christ started out with if He had been willing to follow a worldly ambition.

In the time that He gave to the sick He might have gathered the vastest fortune of His time. With His power to popularize Himself and magnetize the people He could have gained any official position.

No orator ever won such plaudits as He might have won from sanhedrin and synagogue and vast audiences by the seaside; no physician ever got such a reputation for healing power as He might have obtained if He had been a Christ starting out with if He had not elected Himself to the cross if He had not elected Himself to the torture.

To save our race from sin and death and hell He faced all the sorrows of this world and the sorrows of eternity. How much of that self-sacrifice have we? What is self-sacrifice? It is my walking a long journey to save you from fatigue; it is my lifting a great number of pounds to save you from the awful strain; it is a subtraction from my comfort and prosperity so that there may be an addition to your comfort and prosperity. How much of that have we? Might not I rather say, "How little have we?"

Two children, a brother and sister, were passing down the road. They were both very destitute. The lad had hardly any garments at all. His sister had a coat that she had outgrown. It was a very old day. She said, "Johnnie, come under this coat." "Oh," he said, "the coat isn't large enough." "Oh," she said, "it will stretch." He comes under the coat, but the coat would not stretch. So she took off the coat and put it on him.

Self-sacrifice, pure and simple. Christ taking off His robe to clothe our nakedness. Self-sacrifice! I have not any of it, no have you, compared with that. The sacrifice of the Son of God.

Christ walked to Emmaus; Christ walked from Capernaum to Bethany; Christ walked from Jerusalem to Golgotha. How far have you and I walked for Christ? His head ached; His heart ached; His back ached. How much have we ached for Christ?

How much of that humility have we? If we get a few more dollars than other people or gain a little higher position, oh, how we strut! We go around wanting everybody to know their place and say, "Is not this great Babylon that I have built for the honor of my kingdom and by the might of my strength?" Who has anything of the humility of Christ?

The disposition of Christ was also the spirit of prayer. He prayed at all moments, prayer on the sea, prayer among the sick, prayer everywhere. Prayer for little children. "Father, I thank Thee that Thou hast hidden these things from the wise and prudent and revealed them unto babes." Prayer for His friends and for those who will that they be with Him where I am. Prayer for His enemies. "Father, forgive them; they know not what they do." Prayer for all nations. "Thy kingdom come."

How little of that spirit you and I have! How soon our knees get tired! Where is the vital full of odors which are the prayers of all the saints! Which of us can keep our mind ten minutes on a prayer without wandering? Not you; not I. Oh, that we might have the spirit of prayer which was the spirit of Christ!

We want more prayer in the family, more prayer in the church, more prayer in the legislative hall, more prayer among the sick, more prayer among the aged, more prayer among the young. The great advancement of the church is to be in that direction yet.

The spirit of Christ, I remark lastly, was a spirit of hard work. Not one lazy moment in all His life. Whether He was talking to the fishermen on the beach, or preaching to the sailors on the dock, or administering to the rustics amid the mountains, or spending an evening in Bethany, always busy for others. With hands, heart, head, busy for others—heaving in the Nazareth carpenter shop, teaching the lame how to walk without crutches, curing the child's fits, providing rations for the hungry host, busy, busy, busy! The hardy men who pulled the net out of the sea filled with floundering treasures, the shepherds who hunted up grassy plots for their flocks to nibble at, the shipwrights pounding away in the dockyards, the winemakers of Engedi dipping the juices from the vat and putting them into the goatskins, were no more busy than Christ. Busy, busy for others! From the moment He went out of the caravansary of Bethlehem to the moment when the cross plunged into the socket on the bloody mount busy for others. Does that remind you of your own life? Does not remind me of myself. If we lift a burden it must be light; if we do work, it must be popular; if we sit in the pew, it must be safe; if we move in a sphere of usefulness, it must be brilliant; if we have to take hold of a load, give us the light end of the log. In this way to heaven we go, rock us, sing us to sleep. Lift us up toward heaven on the tips of your fingers under a silken sunshade. Stand out of the way, all you martyrs who breasted the fire; stand out of the way and let this colony of tender footed modern Christians come up and get their crowns!

What has your Lord done to you? Christ, that you should betray him? Who gave you so much riches that you can afford to despise the awards of the faithful? At this moment, when all the armies of heaven and earth and hell are planning into the conflict, how can you desert the standard? Oh, backslidden Christian, is it not time for you to start anew for God and anew for heaven?

Now, I have shown you that the disposition of Christ was a spirit of gentleness, a spirit of self-sacrifice, a spirit of humility, a spirit of prayer, a spirit of hard work—five points. Will you remember them? Are you ready now for the tremendous announcement of the text, "If any man has not the spirit of Christ, he is none of His?" Are you ready for that statement? Can we stand up and say, "Yes; we have the spirit of Christ!" Not one of us can make that answer to the full question, yet I am to declare to you there is no discouragement in this subject for Christian people. You have the seeds of this character planted in your soul. "It doth not yet appear what we shall be." You might as well blame an acorn for not being an oak of a thousand years as to blame yourself because you are not equal to Christ. You have the implantation within you which will enlarge and develop into the grandest Christian character, and there is no discouragement in this text for you to try to love and serve the Lord. Aim high. Sheathe not your sword until you have gained the last victory. Climb higher and higher until you reach the celestial hills. Crowns bright and radiant for all the victors, but death to every deserter.



MAKING ENLARGED DRAWINGS FROM LIFE.



MODELLING OF FRUITS AND VEGETABLES.

farming as profitable as in the nature of things it can possibly be. It does this by forcing to the farmer who will avail himself of it full knowledge of the requirements of his art, of the

diseases of truck crops, cotton, wheat, corn and other cereals. A good deal of work is done in investigating the character and conditions, including the proper habitat, of plants that are