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NATIONAL AND STATE AID IN THE
CONSTRUCTION OF GOOD
ROADS

The farms should be made more productive, more valuable, and country life made more attractive for those who produce the food supplies and raw materials of this Nation, by perfecting National and State highways and county and local roads. The residents of city and country alike are interested in the construction and maintenance of good roads.

REMARKS

OF

HON. ROBERT L. OWEN

OF OKLAHOMA

IN THE

SENATE OF THE UNITED STATES

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The Senate having under consideration the bill (S. 2935) to provide for the construction, maintenance, and improvement of post roads and rural-delivery routes through the cooperation and joint action of the National Government and the several States in which such post roads or rural-delivery routes may be established—

Mr. OWEN said:

Mr. PRESIDENT: Senate bill 2935, prepared by the Senator from Virginia [Mr. SWANSON], is drawn in the light of his experience as the chief executive of my old home Commonwealth of Virginia.

This bill provides for the appropriation of \$20,000,000 annually for the construction, maintenance, and improvement of post roads and rural delivery routes through the cooperation and joint action of the National Government and the several States in which such roads may be established, the Nation and State contributing equally to the cost. The value of this proposal is that *the Federal Government would at once take the initiative* and make available to every State the expert knowledge gathered together by the Federal Government on the construction and maintenance of good roads.

This initiative is of supreme importance. No great public enterprise will receive proper attention unless some one is charged with the direct duty of attending to that business.

Experience has shown that the private individual will not take the initiative in building good roads, because the task is too great for him, and in like manner the county, except for the laws passed by the State, would not initiate good roads except in special instances. But with the Federal Government taking the initiative, inviting the State cooperation, every State would be strongly stimulated to improve the roads. This feature of this bill is of great value.

The good-roads department under this bill would speedily formulate and submit to the various States a method of cooperation which would result in coordinating the State and Federal activities in road building upon a uniform and judicious basis. I am sure that the people of my own State of Oklahoma would be glad to cooperate with the Federal Government in improving the highways and rural routes. In the constitution of Oklahoma we established a department of highways, and Hon. Sidney Suggs, of Ardmore, the strenuous and able head of this department, is actively organizing public opinion in support of this the next great step in the national development of the Republic.

Mr. President, nothing that I shall say will be either original or novel, but the facts and the reasons should be emphasized on the attention of the country. The improvement of the public

roads of the United States is urgently necessary for a variety of reasons.

The national growth and prosperity must depend on good roads.

The development of the suburban schools, churches, mail delivery, the intelligence and social intercourse of the country people, the attractiveness, the value, the financial returns, and the physical productiveness of the farm depend upon good roads. Cheaper food products and cheaper manufactured products both depend upon good roads.

Inaccessible and muddy roads cost the Nation a thousand millions annually.

Justice to the farmer, who pays 60 per cent of the taxes and gets but little in return, demands it. The value of the public school, the press, the pulpit, the platform, and all the advantages of civilized life depend upon access, and access upon good roads. The extension of trade, the improvement of the opportunities to the citizen, the relief of the congestion of population in the cities depend upon good roads.

Good roads are absolutely necessary in peace and in war. They are the chief agency of a great industrial people for the free interchange of the products of labor.

THE CONSTITUTIONALITY OF FEDERAL AID TO GOOD ROADS.

It has been said that the United States has no constitutional right to contribute to the building of good roads. I emphatically deny it.

Under section 8, Article I, of the Constitution, Congress is expressly authorized to *establish post roads*, and is given power "to collect taxes," "to provide for the *common defense and general welfare* of the United States."

The perfection of the postal highways and of the Rural Free Delivery Service will extend post roads over every important road in the United States upon which any national attention need be given, and the right of the United States to provide for the common defense carries with it the right to establish national highways, as Rome did, for the movement of our national troops in time of war and for the "general welfare" and the movement of interstate commerce and transportation in time of peace.

The right to provide for the general welfare of the United States sufficiently covers national aid in establishing highways of stone as well as of steel rails throughout the United States.

Why, Mr. President, Congress authorized the Cumberland Road at the headwaters of the Potomac in 1811 at a cost of \$7,000,000, and in 11 years about this period 14 great highways were authorized to be built by Congress.

It was the generally acknowledged doctrine of our forefathers that the Government had this right, and from 1850 the Government granted aid to highways with steel rails from the Mississippi to the Pacific coast and subsidized the Union Pacific, the Central Pacific, the Northern Pacific, the Southern Pacific, and gave away 200,000,000 acres of the public domain in support of national highways.

These contributions would be worth approximately \$2,000,000,000, which went to private persons and private corporations for the building of national highways.

There is no merit in the contention that the National Government may not contribute to the support of post roads within the States.

Down to the most recent days, since the War with Spain, there has been expended from our National Treasury for road building in—

Alaska	\$1,925,000
Porto Rico	2,000,000
The Philippines	3,000,000
The Canal Zone	1,459,073
Total	8,384,073

THE URGENT NECESSITY FOR NATIONAL AID.

Mr. President, we have the biggest country, the finest land, the richest people—and the poorest roads on earth. There is a reason for this, and the reason is that our road-building system is based on the old localized English system in the days of the American Colonies, and has never been adequately improved to meet the advancing knowledge of civilization.

In many of our States we still keep up the destructive and wasteful system of financing road building by taxing adjoining property and administering the construction and maintenance by utterly unskilled, intensely localized management, which is very often too incompetent to merit consideration or defense. It is grossly unjust to tax the farmer to build and sustain the road which passes through his farm, when that road, in fact, is a highway used by tens of thousands who ought to contribute their proportionate part to the construction of the highway.

The National Government, which raises revenue by taxing every man, and the State government, which raises its revenues by taxing all the people, should cooperate with these taxes levied on all the people to construct these highways which are used by all the people just in proportion to the use of the roads. To compel the construction and maintenance of the main highways by the local citizen who has had no opportunity of being instructed in the construction or maintenance of roads is necessarily to place the highways under an administration not equipped to do this work under the safeguard of thoroughly scientific knowledge, which is essential to proper results. Millions have been squandered by this obsolete method, and the roads remain to-day as an overwhelming witness of the incompetence of past management. For example, under the present laws of Texas, in a State which spends more than \$8,000,000 annually on road improvement, the county judge is the one absolute authority on road matters. Such a thing as a county engineer, except by special act of the legislature, seems to be unthought of.

In France, where they have the best roads in the world, at the head of the road system there is a magnificent technical school of roads and bridges, maintained at the expense of the National Government, from which graduates are chosen as highway engineers to build and maintain the roads of France. There is an immediate cooperation between the Republic, the departments, and the communes as completely as an organized army, directed by the most intelligent head possible to obtain.

At the head of the administrative organization is a director general of bridges and highways, under whom are the chief engineers, ordinary engineers, and subordinate engineers, the latter

being equivalent in rank to noncommissioned officers in the army. The subdivisions are under the direction of principal conductors and ordinary conductors. Next in line come the foremen of construction gangs, the clerks employed at headquarters, and, finally, the patrolmen, each having from 4 to 7 kilometers of highway under his immediate supervision.

The great administrative machine working in complete harmony, with definite lines of responsibility clearly established, accomplishes results with military precision and regularity. In this great army of workers not the least important unit is the patrolman, who has charge of a single section of the road. He keeps the ditches open, carefully fills holes and ruts with broken stone, removes dust and deposits of sand and earth after heavy rains, removes the trees, shrubs, and bushes, and when ordinary work is impossible breaks stone and transports it to the point where it is likely to be needed. He brings all matters requiring attention to the notice of his chief.

Every detail requiring attention is carefully noted and reported to the central authorities, so that at any time the exact condition of every foot of road throughout France may be ascertained.

Here is a system, the best in the world, over which magnificent highways vast volumes of farm products find their way at a cost of from 7 cents to 11 cents a ton per mile. Over these roads motor cars can travel 50 miles an hour without danger. They are beautiful. They are lined on either side by ornamental and fruit trees. They are of great commercial value. They lower the cost of living, both to the town and the country, by furnishing the city with cheap food and furnishing the country with cheap freight in transporting their products to town and their materials back to the farm.

In France at the present time there are 23,656 miles of national routes, which cost \$303,975,000 to build. There are 316,898 miles of local highways, built at a cost of \$308,800,000, of which the State furnished \$81,060,000 and the interested localities \$227,740,000. The roads of France are classified into five different divisions:

First. The national routes, traversing the various departments and connecting important centers of population.

Second. The department routes, connecting the important centers of a single department and bisecting the national routes.

Third. Highways of general communication, little less important than the previous class.

Fourth. Highways of public interest, traversing a single canton and connecting remote villages with more important roads.

Fifth. Private roads.

In the German Empire a similar system prevails, and these great nations, including the other nations of Europe, for that matter, set an example to the people of the United States which they would do well to follow.

In England they have a much more localized system, and in consequence there is in England the most striking example of lack of uniformity of road work and of excessive expenditure in proportion to mileage.

The most perfect road system, however, is that of France, which has the *most highly centralized* management of all the road systems.

It is not my purpose, Mr. President, to go into detail with regard to the best methods of construction, but only to point out the extreme importance of *centralized initiative and centralized knowledge proceeding with efficiency upon a fixed basis.*

I do not regard Senate bill 2935, which I advocate, as necessarily an absolutely perfect bill, but I do regard it as a step of very great importance, and I do believe that out of this measure, if it be enacted into a law, we would enter upon a proper system.

I believe we should have a *legislative reference bureau* (for which I have heretofore contended), for the convenience of Congress in digesting and arranging data and making preliminary drafts of bills and which in this case might thoroughly work out a perfected plan suitable to the use of the United States under our particular form of government, providing a system for the most perfect cooperation between the National and State Governments for the development of good roads in this country.

THE COMMERCIAL VALUE OF GOOD ROADS.

Mr. Halbert P. Gillette, an engineer of ability, has with great pains estimated the cost of hauling agricultural products to and from the farm. (S. Doc. No. 204, 60th Cong., 2d sess., p. 56.)

The average haul in the United States is 12 miles of 2,000 pounds at a cost of 25 cents a ton, on an average of \$3 a ton for delivering farm products from the farm to the railway.

In France the cost of hauling a ton a mile is 7 cents and in Germany and England from 9 cents to 12 cents. The direct loss on the tonnage actually hauled in the United States is perfectly enormous. The Interstate Commerce Commission reports show that the railroads handle upward of 900,000,000 tons of freight, of which 32 per cent, or approximately 275,000,000 tons, are the products of forest, field, and miscellany.

Estimating only 200,000,000 tons at a cost of \$3 a ton, we have \$600,000,000 in this item, of which over \$400,000,000 is a flat loss, due to bad roads; but these figures are only a fraction of the haul. To this must be added the enormous tonnage hauled from farm to farm, from farm to village, from farm to town, from farm to canals, wharves, and docks for shipment by water. The unemployed land, the defectively developed land, the wasted products not hauled because of the expense and of impassable roads, the lack of intensive farming at any distance from cities because of the expensive hauling are grave factors of the huge loss due to bad roads. The loss by bad roads upon any reasonable basis would probably exceed \$1,000,000,000 per annum, or the cost of conducting our National Government.

We have bad roads standing as a barrier, preventing the hauling of products from the farm, because the cost of hauling is too high and products are wasted on the farm.

Lands distant from market are not cultivated at all and farms reasonable near to the markets are not put into crops *which would be productive of large bulk*, because of the ruinous expense of hauling such products, and for this reason there are huge areas uncultivated in the United States, estimated by the Department of Agriculture at over 400,000,000 acres. Improved roads would develop this vast domain and make *food products cheaper*. It would lead to intensive and more extended farming. Where the average value is \$8.72 per acre of wheat, \$7.03 an acre of corn, the value of vegetables in 1899 was \$42 an acre and of small fruits \$80 an acre.

The commercial value of good roads, therefore, would mean a saving of a thousand million dollars annually. It would mean

bringing into cultivation vast areas of land now uncultivated. It would bring intensive farming on the lands which are now cultivated. It would mean very much cheaper food products. It would mean the improved financial, social, religious, and educational condition of the farmers.

It would mean a vast increase in the farming population drawn from the congested cities for the benefit of city and country alike.

IT WOULD INCREASE THE VALUE OF FARM LAND.

We have about 850,000,000 acres of farm land improved and unimproved in the United States.

The good roads will exercise a tremendous influence over increasing the value of farm lands accessible to good roads.

By "accessible" it must not be understood as being immediately on a perfected highway. It is an important fact that a team of horses for *two hours out of a day* can exert about *four times* their average tractive force without injury. For this reason they may pull a heavy load for 3 or 4 miles over a dirt road to a perfect highway without injury, and then carry the heavy load easily to market a long distance without harm, so that the farmers within 3 or 4 miles on either side of a good highway would be directly benefited by it; and with the King drag road leading off 4 or 5 miles on either side of a perfected highway all of the farmers of the country could be brought in touch with good roads at a minimum expense to the great increase of their farm-land values.

BAD ROADS MEANS LOSS OF POPULATION.

The sections of country *which have lost in population* by the last census are conspicuous for impassable roads. In 25 counties, for example, selected at random by the United States Office of Public Roads, the population between 1890 and 1900 fell away over 3,000 persons in each county where the roads showed an average of only 1½ per cent of improved roads, while in another 25 counties, in which there was an average of 40 per cent of improved roads, the population in each county had increased over 31,000.

It is density of population and accessibility of land which increase the value of land.

GOOD ROADS MEAN BETTER SCHOOLS AND CHURCHES.

Improved roads mean improved schools and churches. Where the roads are very bad the children can not easily attend school, nor can the people easily attend the churches, but with good roads they could do so. In the States of Massachusetts, Rhode Island, Connecticut, Ohio, and Indiana, in which, in 1904, about 35 per cent of the roads were improved, 77 out of each 100 pupils enrolled attended the schools regularly; but in the five States of Alabama, Mississippi, Arkansas, Georgia, and South Dakota, which had, in 1904, only 1.5 per cent of good roads, only 59 out of each 100 pupils enrolled could attend public schools regularly. Thus good roads enable 30 per cent more children to attend school.

THE PRESENT CONDITION OF THE PUBLIC ROADS.

We have to-day 2,155,000 miles of public roads within the United States. Less than 180,000 miles are macadamized or improved with hard surfacing.

More than nine-tenths of the public roads and highways of the United States in the rainy season are almost unfit for use,

and a large part in a very rainy season are utterly unfit for use and impassable, to the grave injury of the farmer and the *equal injury of the town people who depend upon him for regular supplies of food.*

In some of the States improved State methods are being put into force, but the department of good roads of the United States Government should be stimulated in the highest degree, so as to furnish the people of the United States with full information upon the important commercial, financial, educational, and social aspects of this great national problem. The department should be put in a position where it can stimulate public attention and bring all of the States into harmony with this great scientific problem. Road building and road maintenance is a great *science*. It has taken generations of men to learn the best methods of road building and maintenance, and the highest knowledge in the world in scientific road building should be placed at the disposal of the humblest citizens of this Republic so that he could be a direct beneficiary of the advancement of human knowledge in this respect.

THE RELATION OF PUBLIC ROADS TO THE FARMER.

Farm life should be made more attractive. No matter how fertile the land or how favorable the climate, if the farmer is imprisoned by bad roads, he can not enjoy fully farm life. He can not conveniently reach the school, the church, the town, or his friendly neighbors if the roads are very bad.

We can not expect the greatest social, moral, mental, and material development of the farmer if the roads are bad.

Only 8.2 per cent of the total road mileage of the United States is improved at the present time, yet we expended approximately \$79,000,000 in work on roads in 1904. The expenditure has been entirely out of proportion to the results accomplished. The reason for this I have pointed out. It is due to the extreme localization, bad road laws, bad administration, and lack of coordination. We have little skilled supervision, with but few men with a knowledge of road building or of any profound interest in it. The laws must be changed, and they can only be changed and greatly improved by instructing the public mind and public men.

The profit of the farmer is represented by the difference between the cost of production and transportation and the selling price. If he can cut the transportation in half, he will materially benefit himself financially; and if the cost of transportation could be reduced \$600,000,000, the farmer would easily be benefited to the extent of one-half of this saving, granting that the city inhabitants would benefit by the other half of the saving. We complain of the high cost of living, and do not sufficiently analyze the reasons for the high cost. Lower transportation means lower cost of living, both to the farmer and city resident.

We should perfect the national waterways likewise and control the railways to lower the cost of transportation.

The mean cost of carrying wheat from New York to Liverpool—*by water 3,100 miles*—is only 3.8 cents per bushel, while it costs the farmer on an average more than that to haul his wheat to the railway station.

The consular reports show that hauling in Germany, France, and England is frequently as low as 7 and 8 cents a ton a mile, and rarely higher than 13 cents.

The cost on fair earth roads is 25 cents a ton per mile; on earth roads containing ruts, 39 cents; on sandy roads when wet, 32 cents; on sandy roads when dry, 64 cents; on black gumbo when thoroughly wet passing is impossible. Steep grades on the roads is another serious tax on transportation, because "the chain is no stronger than the weakest link."

If the farmer has good roads, he can take to the town two or three times as much in a load as he does now. He could haul to town from a distance two or three times as great as he does now. He could haul to town products which now are prohibited by the expense of hauling. He could raise a larger variety of products suitable for marketing. He would be directly benefited by making the town, the people, and the school more accessible.

He would be benefited by making his neighbors easier of access, and in that way his social pleasure and personal happiness would be increased.

He would be able to deliver his farm products to the town every day in the year, and therefore would have a steady market throughout the year for his products, whereas he may be by muddy roads excluded for two and three months at a time from his market, and the town people in like manner may be deprived of vegetables, fowl, eggs, milk, and other farm products which are essential to their comfort.

In Bradley County, Tenn., bonds were issued for 160 miles of excellent macadam roads, and lands that were valueless before these roads were built now find ready purchasers at from \$15 to \$30 per acre.

EFFECT OF ROAD IMPROVEMENT ON TRAFFIC.

If the roads were improved, *traffic would not be congested* at one season and very limited at another season, because the transportation of the crops could be made at convenience and uniformly without the interruptions of bad weather. The railroads could, therefore, maintain a more regular service with a smaller equipment, fewer employees, and less cost of operation. This means cheaper freight rate for all the people and lower cost of living.

I have not taken into account the wear and tear on teams due to bad roads, the destruction of wagons and vehicles, the danger to life and limb from bad roads.

THE RELATION OF GOOD ROADS TO THE PUBLIC HEALTH.

If the roads are perfectly good, the physician or surgeon can with the modern motor car go to the aid of one in danger of death almost immediately, but when the roads are impassable death might ensue before relief could be obtained. If the roads are wet and bad and children march to school with wet and muddy feet, their vitality is lowered and loss of life must ensue.

THE DIFFERENCE BETWEEN THE CITY AND THE COUNTRY.

Many men complain that there has been a steady movement from country to city. The reason is plain. The city is more attractive to live in because *it has perfect roads* of asphalt, macadam, and Belgian block, and concrete sidewalks. No person need to have his feet muddy in going from one point to another. In the city is concentrated many of the things that human beings desire, but if the country had good roads it would be a more desirable place to live in than the city. The

countryman has good air, free from dust and smoke. He is away from the roaring noise of the city and the everlasting grind of the wheels of the street car. In the country he has his own fresh food, prepared by nature, at his hand; poultry, eggs, fresh milk, cream, butter, fresh vegetables of all kinds, and fresh fruits—peace, young animal life to interest and please him, and nature smiling back in his face and giving him 10,000 per cent for every seed he plants. With good roads he can come to the city when he likes and go back to his peaceful, pleasant home, satisfied.

City life enervates and weakens human beings, as a rule, because of the nervous strain of city life, while in the country a man grows strong, with steady nerves, good lungs, and brawny limbs. The conditions of country life should be made more attractive. The social intercourse and pleasure of country people, proper school facilities, and church advantages should be made available with good roads. From the country has sprung the greatest mead of genius and patriotism. Nearly half of all of our people are engaged in agriculture, and they furnish half of the taxes and produce three-fourths of the wealth of the Nation. I am in favor, for their sakes, of stimulating the building of good roads, but let us remember that the building of good roads is just as important to the city man who lives on the produce of the country as it is to the countryman who raises that food supply. It is of equal importance and value to both the residents of the city and of the country. It is of equal importance to the professional man and to the laborer, to the farmer and the city merchant, to the producer and the consumer. It means lower cost of living to all. It means great commercial and financial advantage to all. It means greater pleasure and enjoyment of life to all.

Many of our Government expenditures are made without return, but here is a magnificent investment, which, if it were based upon the credit system, would pay 15 per cent on every dollar judiciously invested and would add to our national wealth more rapidly than any other national investment into which we could invest our national credit or our national energies. The experience of other States has shown the importance of the State taking the initiative and guiding the activities of the counties and in this way getting greater results. This has been fully explained by the Senator from Virginia as the experience in that State.

AN AVENUE TO EMPLOY THE UNEMPLOYED.

If we had this system established we could give employment to the unemployed at rates that would not attract men already engaged but would attract men out of work and in need. There are hundreds of thousands of men of this class available.

Mr. President, this bill ought to be immediately reported and passed. I remind Republicans that public sentiment has so far crystallized that in their national platform of 1908 they cordially indorsed aid to good roads in the following language:

We recognize the social and economic advantages of good country roads, maintained more and more largely at public expense and less and less at the expense of the abutting property owner. In this work we commend the growing practice of the National Agricultural Department by experiment and otherwise to make clear to the public the best methods of road construction.

And I remind my brother Democrats that in our last platform we had the following plank.

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POST ROADS.

We favor Federal aid to State and local authorities in the construction and maintenance of post roads.

Let us fulfill in good faith our party pledges.

THE VALUE OF INTENSIVE FARMING—"BACK TO THE LAND."

"Gentlemen, it would be impossible to exaggerate the importance of the objects contemplated by the National Farm Land Congress.

"In 40 years we shall have over 200,000,000 people, and this estimate does not fully take into account the geometric progression which immigration makes probable under the enormous growth of seagoing vessels of mammoth size.

"Our breadstuff exports in 25 years has decreased 24 per cent, notwithstanding large areas of new lands producing wheat and corn.

"Our home demand for wheat in a quarter of a century has grown 80 per cent more than the supply of wheat.

"The object contemplated by the National Farm Land Congress is to develop farm lands, encourage home building on the farm, increase the productiveness of our farm land, make our farms more accessible by the building of good roads and improved national and local highways, and make our farms a potential factor in promoting the wealth, the health, the beauty, and happiness of the Nation. Nothing could be of greater national importance.

"With these objects I find myself deeply in sympathy. One of my earliest recollections was of the intensive farming of a piece of land in Lynchburg, Va., of about 2½ acres, surrounded by a high brick wall; the inclosed land was divided up into a dozen or more plots of ground, with graveled walks lined in certain parts of the garden with dwarf box and with flowers.

"Some of the squares were used for vegetables, Irish and sweet potatoes, beets, parsnips, salsify, okra, radishes, onions, lettuce, cabbage, mustard, asparagus, tomatoes, several kinds of sweet corn, the watermelon, cantaloupe, and sweet pumpkin for cooking, rhubarb, and other succulents. Other beds against the brick wall had beds of strawberries, raspberries, blackberries, currants, gooseberries, and various vines.

"Even in the winter this land furnished the table with vegetables stored in sand pits, and with fruits preserved and canned, and with pickles, marmalades, and other things edible.

"I remember sweet herbs in this garden—of thyme, sage, etc. I recall with affection certain arbors devoted to the grape, which, in their season, had a special charm for me. Around the edge of these squares were many beautiful varieties of fruit—of peaches, of pears, the sweet Sickle, the Royal Bartlett, the Damsion, the plum, the cherry, the apple. The yellow June apples in that garden were sweet enough to tempt, and often did tempt, a small boy about my size to risk an appearance before the Throne of Grace without any other preparation than an incredible number of June apples eaten in reckless disregard of consequences.

"I have never seen anywhere a more beautiful variety of hyacinths and tulips than grew in this garden, with all the old-fashioned English flowers—the jonquil, the narcissus, the crocus, the lilies of the valley, the phlox, the snapdragon, and many others; the Easter lily, the tiger lily, and a great variety of roses.

"I remember the yellow and red honeysuckle, covering a trellised summerhouse, mingling its fragrance with the pleasant odors of the climbing rose which helped to cover it.

"As I used to enter this charming spot of land from the dining-room door, I recall passing between two trees of crepe myrtle and, a few steps farther on, by two large shrubs of the euonymus. There were several large box trees in the garden, whose thick cover afforded a hiding place for many birds, whose twilight repose I used to disturb for my amusement by shaking the trees.

"There was in this garden a large clump of cane which furnished the boys of the place with convenient fishing rods, and everywhere throughout this 2 acres was manifest the highest intelligence, the finest taste, and unceasing industry.

"The guardian spirit of this garden was my mother, under whose hand everything which grew out of the ground always flourished. I have always thought that the ministering angels who supervise the growth of plants must have specially loved the gracious spirit of my mother, for her plants lived, no matter what happened to the gardens of other people. I shall never be satisfied until I am able to own and to enjoy such a garden as she had, and with which she made my boyhood days happy. Adjacent to the garden was a big smokehouse where we put up our own meat, and a yard where the chickens and ducks flourished and helped to feed the family.

"I may be forgiven these personal reminiscences when I point to the fact that this two acres and a half of land furnished a very large household with the greatest abundance of food in the form of vegetables, fruits, berries, grapes, throughout the year, as well as with an abundance of beautiful flowers. It was intensive farming. Every foot of the ground was kept thoroughly manured, the plants were transplanted from time to time where their nature required it, and the life habits of every plant were studied and thoroughly understood.

"In contrast to the productive power of this two and one-half acres, I have seen, in Indian Territory, a poor farmer trying to cultivate enormous areas of land with a single team, and with the invariable result that his crop was so poor as to afford him and his family not even the necessaries of life, much less its conveniences or the luxury of fruits and flowers. Such a farmer, with bad and muddy roads to travel, is practically isolated from the market, from the school, from the church, and from other conveniences and pleasures of civilized life, and can not conveniently or cheaply deliver to market even those things which he does raise.

"The man who works more land than he can cultivate thoroughly well wastes his time; he does more: He makes life up-happy for himself, for the faithful woman who loves him, and for the little children who look to him for guidance. He is not as useful nor as happy a citizen as he would be if he concentrated himself on 40 acres, cultivated a garden, kept a few cows for milk and butter, raised chickens and other fowls and domestic animals out of which the profits of the farm arise.

COMPARISON WITH ENGLAND, GERMANY, AND FRANCE.

"In England, Germany, France, Belgium, and Holland the people obtain much higher results than in the United States. The average wheat production of Great Britain is over 32 bushels to the acre, and in the United States only a little over 13 bushels to the acre.

"I spent the summer in Germany and France, and there I saw that every foot of the ground was thoroughly cultivated. It was divided up into very small tracts, and off at a distance would look like strips of carpet laid upon the rolling fields. There was constant rotation of crops; they were busily engaged in fertilizing with manures, making the ground richer. The farm roads were in splendid condition, and thousands of miles of surveyed, carefully leveled and graded turnpikes afforded the farmer cheap transportation, so that a single team might move 4 or 5 tons with less difficulty than half a ton could be moved by the same team on some of the terrible roads in the United States. What an object lesson to the people of the United States are these splendid roads, which increase the value of the farm, bring the farmer nearer to every convenience of civilized life, make his products more valuable, and make the conditions of life much more attractive.

"Along these roads I observed miles of fruit trees, the cherry, the apple, the pear, and every one of them marked with a number indicating ownership.

"I think I never saw a house so poor that it did not have its vegetable garden and its garden of flowers.

"In coming from Fifty-seventh Street down to the Auditorium, on the Illinois Central, the back lots of the American homes, seen from the cars, shabby, dirty, and unkempt, are absolutely distressing and shocking to those who have positive views in regard to making land either useful or beautiful.

"Every such back lot in Germany and France and England or Belgium or Holland would be a valuable vegetable garden ornamented with flowers. We can be engaged in no better business than in leading our people back to the use, and the perfect use, of our most precious heritage—the land. Let us get back to the land.

THE VALUE OF THE FARM AS A NATIONAL RESOURCE.

"Our farms produced last year eight thousand millions of created wealth. Our cotton crop alone furnished enough export cotton to give us a balance of trade in our favor. The output of the American farm, by proper cultivation, could, however, be immediately doubled, and by reclaiming waste places with proper cultivation, could easily produce over twenty billions of wealth per annum—a sum about equal to the total accumulation of a century in the banking resources in all of our 25,000 banks.

"The work of such men as Luther Burbank, of Santa Rosa, Cal., in improving plant life has a value of which our people generally have had an adequate conception.

"In Oklahoma a new plant has been developed from the common seeding Bermuda, called the "Hardy Bermuda," which has great national value. It has been developed by careful selection of plants which have withstood severe freezing. The plant has as good nutritive quality as timothy; it comes up early in the spring; it has a root over a foot deep; it grows almost as thick as the hair on the head; it grows luxuriantly in the face of dry weather; will successfully stand the most extreme drouth; is not killed by many days of overflow; will grow on alkali spots and in the sand. It will produce a very large amount of food to the acre, and is an excellent grazing grass. It is impossible to exaggerate the value of a plant of this character, which will convert land heretofore unproductive into productive areas of

great value. Our people must have food, and this plant will produce great food supplies from land heretofore producing nothing. We must emphasize making our lands more productive by using proper suitable plant life and concentrating labor on the land.

IMPROVEMENT OF THE NATIONAL HEALTH.

"The annual death rate of New Zealand is nine to a thousand, and of the various Australian States, ten to a thousand. In the United States it is over sixteen to a thousand—60 per cent more than in Australia. If our people can be led back to the farm, where they can get plenty of fresh air, fresh vegetables, milk and butter, and chickens, we will save these lives which now amount to over a half million beings per annum in excess of what it ought to be.

"The tables of mortality show that this high death rate is very largely due to the bad housing, bad food, and bad sanitary conditions of the very poor in our congested cities.

"In the fight on tuberculosis abundant fresh air has been demonstrated to be essential to a recovery. Abundant fresh air is essential to keep people well who are not now sick, and is all the more important when they become afflicted with the extremely dangerous tubercle bacillus. Let us encourage our people to get back to the land, and we shall greatly improve the national health.

IMPROVEMENT IN SELF-RELIANCE AND OTHER MORAL QUALITIES.

"In cultivating the land, all of the moral qualities are stimulated, independence, self-reliance, initiative, courage, honesty of mind. In working on the land, a man is able to provide his own comfort; he can build his own house with his own hands; he can supply every article of food he needs, and create a surplus sufficient to buy other things. He receives nothing for which he does not give an equivalent; he promotes his own comfort, his own self-respect, and his own dignity. The greatest men of the Nation have come from the farm. The man on the farm, who is cultivating a small piece of land of his own, need have no fear of being suddenly discharged by his employer and left with a family on his hands to feed, and no means to buy food or pay rent until he finds another job. On the farm there is no danger in losing his job.

"This gives a man courage, self-reliance, and those moral qualities which go to make up good citizenship. Without the private virtue of the individual citizen our Republic can not rise to its great and honorable destiny. Let us get back to the land. Let us improve the roads that lead to the farm and from the farm and give the farm greater attractiveness because of its accessibility to the towns and cities.

THE VALUE OF SMALL HOLDINGS.

"The French Revolution was due to the abuse of the unrestricted land holdings of the nobility, from which vast incomes were derived, thus leading to a great extravagance of the land-holding class in the face of the extreme poverty and misery of the unemployed landless masses. The landholders were so rich they did not need to use the land in full, but devoted very large areas to game preserves, while the poorer French people, who had also been brought into the world by the hand of the Omnipotent, were denied access to the land by the landlords, who preferred to see their estates used in large part for purposes

of amusement, as hunting parks. The French law, of course, sustained the French landlord until the corrupt extravagance of the landholding class and the abject hunger and misery of the multitudes led to the overthrow of the laws which permitted this condition, and the bloody French Revolution followed.

"The revolution resulted in the subdivision of France into small landholdings, which, under the laws of inheritance, was still further subdivided.

"The result of this subdivision has been intensive cultivation and great agricultural wealth from the soil of France, making it one of the richest nations in the world. The reverse of this policy is seen in Spain and Mexico, where huge estates have been permitted to exist, with the unavoidable result that the productive capacity of the land has not been developed, and where the extremes of great wealth and abject poverty are in more marked contrast than in any other civilized country.

"The United States should pursue a policy of small landholdings, and the State of Oklahoma has led the way by passing laws imposing a progressive tax on large holdings of land, for the purpose of stimulating actual home building, of promoting the greatest productive capacity of the land, and for the abatement of the nuisance and danger of large landed monopoly.

"The smaller subdivision of land will lead, therefore, directly to its intensive cultivation, and just in that degree as the lands are thoroughly well cultivated, just in that degree will the value of farm lands increase, and with the increase in the value of farm lands, and the growth of their productions, just in that degree will city property and suburban property increase in value.

"Likewise, this will lead to the building of good roads, and to the increase of the liberty, of the independence, and of the personal happiness of all of our people, both on the farm and in the cities. Our cities are sadly congested and millions of people could be led to the farm, both to their own welfare and to the advantage of the Nation. The pimp, the cadet, the white woman slave would be more useful and happier as an honest plowman, gardener, and milkmaid.

"THERE IS A CHARM ABOUT THE FARM.

"Under proper conditions nothing can be more beautiful or more attractive than the farm life. In times past with bad roads and muddy weather, and fields too big for the farmer to cultivate successfully, men have often worked themselves down, have grown weary, have made themselves poor, by ill-directed effort, and have made themselves, their wives, and children sorrowful and miserable in consequence. Under such conditions the farm has often been like a prison instead of being a place of liberty, prosperity, and happiness. The boys and girls have too often been glad to leave the farm to get away from its dull routine and solitude. But the time has come when there should be a complete reversal of all this. We have learned how to avoid these things and the valuable lesson should be universally taught and made a common heritage.

"Let the man—if he have too much land—sow his excess in grass, in hardy Bermuda; let him confine himself to what he can thoroughly cultivate; use only plant life suitable to the seasons, as kaffir corn and milo maize for dry weather, and learn how to do the work well; let him surround himself with a beautiful garden; let the women and children be taught to love these things and the farm will become a lovely home.

"It's a good thing to keep the children on the farm, away from the temptations and evil suggestions that surround them on every hand in the city. In the light of modern invention, with our wonderful modern transportation, with electric railroads running everywhere, with rural mail delivery, with cheap power, heat, and light, with improving values in farm products, with cheapening goods of every description, every family man should have a piece of land, if it is only 10 acres, or 1 acre, upon which he might surround himself with the fragrance and the blossom and the fruit of plant life, where he might raise healthy, happy children. What can be more beautiful, or more valuable than a well-kept vegetable garden, filled with all kinds of foods of every flavor—filled with berries and grapes, and trees bearing fruits and nuts, and ornamented with the endless procession of flowers each advancing season affords?"

"What more attractive than to be surrounded by the young and cheerful life of the farm—young chickens, ducks, turkeys, calves, lambs, pigs, colts, and last but not least, the opportunity to have a few good dogs, whose love and companionship is not the least of the attractions of the farm.

"'Back to the farm' should be the bugle call to the youth of our land.

"Back to the farm, where peace and quiet and sound, refreshing sleep follows happy labor, where we can hear the birds, singing their songs of thanksgiving in the early morning among blossoming trees, where homely joys can give a life of happiness, where men and women grow sound of heart and strong of limb and nerve.

"Back to the farm, with the friendly brute for neighbor,

Where honest content will make amends for every city glamour.

"I should like to see an agricultural school of practical instruction and of plant and seed distribution in every agricultural county in the United States, where the care of cattle and horses and sheep and swine and domestic fowl and the economies of farm life and its productive capacity should be properly taught; where the great lesson might be taught and emphasized by the Government—both National and State—that there is *no* profession more honorable than farming, and that no occupation is of such *vital importance* to the wealth and health of the Nation.

"I rejoice at an opportunity of giving expression before the National Farm Land Congress of the deep interest which I feel in this matter, and I trust that this congress may be the beginning of an organization which will emphasize in the most powerful manner the importance of the farm to our national wealth and to our national health and happiness.

"This congress should, above all things, emphasize the great importance of good roads to and from the farms of the country. It should encourage State and National aid to good roads, so as to bring to the expenditure on road building the greatest degree of intelligence and efficiency and concentrated effort. This is, perhaps, the most important factor of all in making the farm more desirable to the people, in making the farm more attractive, in making it more remunerative, and giving to it those elements which are necessary and essential to peace of mind and to the prosperity and happiness of the farmer."