

Good Road Work United States Government is Doing

WASHINGTON, D. C., Oct. 21.—On the corner of Fourteenth and B streets, southwest, just opposite the bureau of engraving and printing, where Uncle Sam's money is made, and across the way from the new Agricultural department, where the scientists are making new plans for the farmer, stands a building which has much to do with the United States of the future. It is not connected with the Department of Commerce and Labor, but it affects every merchant and every one who works with his hands. It affects the farmer, the farmer, and, in short, every man, woman and child in the country. It is the office of public roads, where Uncle Sam is planning how to better our highways. It is not an automobile in institution. It is working for the plain people and its motto is good roads from the farm to the market. Such roads will cut down the prices of all farm products. They should reduce the cost of living and put money into our pockets.

Uncle Sam's Roadmaster.
Have you any idea how much we lose from bad roads? The scientists estimate that the cost is over \$2,000,000 a day, or, in round numbers, about \$50,000,000 a year. I have had a long talk with Logan Waller Page, who has charge of this road work, and who perhaps knows more about our roads than any other man in the country. He is a civil engineer, who graduated at Harvard a decade or so ago, and who for a time acted as geologist and director of the testing laboratory of the Lawrence scientific school there. He was on the Massachusetts highway commission, and then became chief of the division of tests in the department of Agriculture, after which he was made the director of the United States office of public roads. The improvement of the roads practically began with him, and the great work that is now going on is under his management.

The Highways vs. Europeans.
According to Mr. Page we have about the worst roads of any civilized country on earth. Europe is crisscrossed with magnificent highways, and in France, Germany and England one can ride for miles without striking a stone or puddle. Said Mr. Page:
"The cost of hauling over our country roads is now about 3 cents per ton to the mile. In the European countries as long as eighteen years ago the cost had been reduced to 1 cent, and it is much lower today. On some of the roads going into London, by the motor cars now in use, it is less than 4 cents, and by wagon freight can be hauled almost anywhere on the continent for from one-half to one-third its cost in the United States."

A Saving of Millions.
"Can you give me some idea of the saving that good roads would bring?"
"Not accurately," replied Mr. Page, "but I can show you some figures which will convince you that it will run into the hundreds of millions of dollars. According to the report of the Interstate Commerce commission in 1905, our railroads handled more than 800,000,000 tons of freight which originated on their respective lines. All this had to be taken to and from the cars. A great deal of it was made up of the products of the farm and the forest, and it is estimated that at least 20,000,000 tons of it had a haul of nine miles at a cost of 23 cents a ton. That bill alone would represent more than \$45,000,000, and other freights and haulings would run the sum to \$60,000,000 or over. Now suppose we cut the wagon freight bill in half, or to 11 1/2 cents a ton, which is still far above the cost of hauling in Europe, and the saving would be \$20,000,000."

Indeed, it is impossible to overestimate our loss by bad roads," continued Mr. Page. "The Fruit Growers' Association of Oregon lost in one year by damaged fruit from the Willamette valley, owing to bad roads, \$300,000. The cost to the fruit crop is enormous, and it is so with every crop of the farmer. Take the wear and tear on the horses. We have more than 25,000,000 draft animals, which are worth more than \$2,000,000,000. Better the roads and the work done with half the number, making a saving of \$1,000,000,000 in capital. We have 500,000 farm wagons manufactured each year. The wear and tear upon them runs high into the millions."

Quick Transit and High Prices.
"And then look at the money which the farmer makes by getting his crops to the market on time. Wheat and cotton have rapid changes of prices. In 1907 the range of wheat at Minneapolis was from 75 cents to \$1.15 per bushel, and there was a difference in the selling prices of corn at Chicago of 24 cents per bushel. If the man got his grain to the market while the prices were high he did well, but if the bad roads kept him back he had to take a low figure."

"This loss from bad roads prevails all over the country, but especially in the south. I have just returned from a long trip through that region and have made a study of some of the conditions. Let me show you what good roads would do for corn and cotton, which, together with tobacco, are the staple crops of the south. The southern roads are worse than those of other parts of the country, and the average cost of hauling is, therefore, far more. The average cost of taking corn to the station in the United States over is about 7 cents per hundred, while in eleven of the southern states it is more than 15 cents per hundred. Those eleven states produced last year 22,000,000 bushels of corn, and if it had been hauled to the market the total freight cost would have been over \$71,000,000. Now, suppose that four-fifths of this corn was consumed on the farms, and that only 10,000,000 bushels were hauled. In that case the cost of hauling would have been more than \$14,000,000, and if it could have been hauled as cheaply as in other states of the union one-half of that amount, or more than \$7,000,000, would have been the saving on the corn haul alone."

What Bad Roads Mean to Cotton.
"The loss on the cotton crop is very much greater," continued Mr. Page. "At 15 cents per 100 the cost of hauling is about 50 cents per bale, and as the average distance each load is taken is about eleven miles, the time consumed is one day. The average load is a little more than three bales or 1,200 pounds, so that it costs about \$2.50 to get each load to the market. The cotton crop of last year was just under 12,000,000 bales, and to make a long story short we figure that the transportation cost of taking it to the ginners and then to the railroad, including the cost of hauling the seed, was about \$30,000,000. If the roads were as good as the average this sum would be cut down one-half, making a saving of \$15,000,000. But this is in the south. Similar conditions prevail in many parts of the north, and altogether the loss on our



MAKING NEW ROADS FOR CIVILIZED LIFE



OLD AND NEW ROADS SHOWING DIFFERENCE IN HAULING

hauling is one of the biggest leaks of our whole industrial system."

Uncle Sam's Roadways.
"What is the extent of our roadways?"
"I suppose you mean the United States over," said Mr. Page. "We have altogether something like 2,500,000 miles of roads of one kind or another. We have enough altogether if placed end to end, to reach 100 times around the earth and have some to spare. Much of this length, however, is of a character not worthy of the name road. Some of it is little better than a rock pile, and others are wide tracks through ditches and swamps. Of the whole only seven miles in each 100 can be said to have any improvements whatever, and on the most of it the improvements are such as to be unworthy of note. Altogether not 2 per cent can be called first class."

"But I thought we were doing a great deal as to improving our roads, Mr. Page?"
"So we are, but a vast amount of the money spent does no permanent good. The ordinary way of handling the roads is through a road superintendent or supervisor, who is usually a politician and who knows nothing about roads. In many cases he patches up the highways in front of the farms of his principal constituents, digging out the weeds from the sides and throwing them to the center. In many places the road taxes are paid in labor. This gives unskilled and irresponsible workmen, and in other places the roads are let out by contract, which often means graft. In some of our towns the streets have been torn up and relaid again and again, and the same will be the case with roads of the counties which are contracting for highway improvement. First a gravel road may be made and the contractor will make his profit off that. Then another vote of the people may change the gravel to macadam, and a third tearing up may change it to brick. Millions of dollars are now being appropriated for roadways by the various counties and states, but in many cases the money is being unwisely spent."

Government Road Work.
"What kind of roads does your office make?"
"We are making object lesson and experimental roads here and there over the country, to show the people what good roads are and how they should improve those of the present. As it is now, we have built in the neighborhood of 200 such roads in thirty-four different states. These roads are of the various kinds best suited to the several localities. Some are of gravel and sand-clay and burnt-clay, while others are of shell and others are oiled and cement roads. In this work the government furnishes the engineering supervision, and prepares the plans, specifications and estimates of the work. The locality pays the other expenses. In addition to this we test road materials and advise the people as to what roads are the best for their special localities. We

How Highways Should Be Managed.
"What would be the best system of road improvement?" I asked.
"If we could have a general road organization such as that of some of the countries of Europe it would create a revolution in our public highways. Take France, for instance. Its roads are all under the department of public works, at the head of which is a cabinet minister."

How to Absorb An Old Complexion
(From Popular Monthly.)
A girl signing herself "Discouraged," writes she has "tried everything" for her "coarse, porrid, muddy complexion" and asks, "Is there no really effective remedy?"
Doctoring your complexion with stuff that comes out of jars and bottles is liable to make it more unsightly. The only sure way to rid yourself of a bad complexion is to remove it—take off the offensive skin. Ordinary mercurochrome wax, secureable at your druggist's, will do this. Apply at night, as you would cold cream; wash off in the morning. The wax absorbs the dead and drying outer skin, revealing the clear, soft, healthy and beautiful skin underneath. Naturally all surface defects go, too, as pimples, blotches, liver spots, moth patches, freckles and blackheads. The treatment causes no discomfort. No one can tell you are using it, the old skin coming off so gradually.—Adv.

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FERULLO
and His Famous Band at
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Today and All Week



LOGAN WALLER PAGE, UNCLE SAM'S ROADMASTER

highway engineers. Our men are all civil engineers, the graduates of the best of the colleges who have passed our examinations. After working with us a short time they are in great demand over the country, where road improvement is now going on. Many of them are employed by the states or by cities and counties, where the salaries are larger than those paid by the government."

What the States Are Doing.
The conversation here turned to the work of road improvement now going on throughout the states, when Mr. Page said:
"Within the last fifteen years nearly half of the states of the union have adopted the principle of giving state aid to road building. New York has authorized the issuance of \$50,000,000, to be spent at the rate of \$5,000,000 a year, the various counties to supply an equal amount. A great deal of such improvement is going on in the south. Virginia has appropriated \$30,000,000 to be spent under the state highway department, and Louisiana will levy a tax of one-fourth of a mill on all of her taxable property as a highway fund. Alabama has made extensive appropriations, and Maryland will spend this year \$1,250,000 in the same way. At the present time the sixteen southern states have available for road expenses about \$40,000,000, which is just double the amount devoted to such purposes in 1904. Indeed, the south has become highly interested in improving its roads."

Working the Convicts.
"I understand that many of the southern states are working their roads with convict labor?"
"Yes, and I think with great profit. In Virginia the state convicts are employed in road building, and the supervising engineers say that the convict labor is even more effective than paid labor. Georgia has nearly 5,000 prisoners at work on its roads. Louisiana will use its state convicts in the same way, and a part of the Alabama appropriation for roads comes from the convict labor fund. I see no reason why convicts should not be worked on the roads. In such cases they do not compete with free labor as in the prison factories, and the open-air work should be healthy."

What Good Roads Cost.
"What does a good road cost?" I asked.
"That depends much on the location and the material at hand. It is cheaper to build good roads in the south than in the north, for the southern wages are lower and the working period is longer throughout the year. The most of the southern soil is good for the purpose. There is plenty of gravel and sand-clay, and we can make macadam roads there cheaper than in the north. In Louisiana a macadam road can be made for \$1,800 a mile, and the average cost in nine different states of the south is less than \$4,000 per mile. In Butler county, Ohio, where they are now making bituminous macadam roads, the cost is \$7,000 a mile, while in Massachusetts the average macadam costs \$3,000 per mile. The average cost of making state roads in New York is more than \$9,000, and Ohio, which has many brick roads, has recently let out a contract for the construction of five miles of such roads near Ravensburg, which will cost altogether more than \$70,000 or over \$14,000 per mile. Good roads cost all the way from a few hundred to \$10,000 or \$15,000 per mile, according to their character and the materials of which they are constructed."

Roads of Oil and Cement.
Before leaving the office of public roads I took a walk with Mr. Page through his laboratories. The bureau has a large force of chemists, engineers and other scientists, who are planning out and testing materials for the roads of the country. They are always experiment-

ing as to new roads, and among many other things have made valuable discoveries as to the use of oil and cement on the roads. The ideal road of the future will be without dust, and some model roads now constructed are bound together with bitumen and other materials which make them practically indestructible. One of the most valuable discoveries of recent years as to roads and all sorts of masonry is an invention of Mr. Page, which has been patented by him, but which is given to the public without charge. This is a process of mixing a little oil with concrete or cement which makes it absolutely waterproof. Upon such concrete the water stands in globules as it does upon glass, and if the cement mixture is whitewashed on bricks they become waterproof.

FRANK G. CARPENTER.

SOME SHOW FOR BACHELORS

Fifty is Just the Right Age for a Bridegroom, a Woman Says.

An interesting and unusual estimate of the proper age for matrimony is that advanced by Mrs. Vivian, head and founder of the National Society of the Daughters of California. The happiest and most successful marriages, she says, are those between the man of 50 and the woman of 35. At that age of discretion, she claims, the male has become more mellow and tolerant as well as more solvent. On the other hand she intimates that a girl of 20 is much harder to get along with than to get along without, and that there ought to be laws prohibiting people marrying before they are 30 years old.

We do not know what authority the Daughters of California have in such matters, comments Success, but we fancy that improvident young people will for the present continue to rush headlong into matrimony at assorted tender ages. When Mrs. Vivian's theory gets into working order the bachelor entering the hall, corpulent at age of 50 may as well leave hope behind. If Dr. Oiler doesn't get him the Daughters of California will.

ECZEMA ITCHED SO I COULDN'T STAND IT!

Began by Little Pimples. Scratched Until Blood Came. Kept Getting Worse. Could Not Sleep Nights. Used Cuticura Soap and Ointment and the First Day They Relieved Itching. In 3 Weeks Eczema Cured.

"I suffered with eczema on my neck for about six months, beginning by little pimples breaking out. I kept scratching till the blood came. It kept getting worse. I couldn't sleep nights any more. It seemed as if I was going to get better, but when I started again, it was even worse than before. The eczema thickened so badly I couldn't stand it any more. I went to a doctor and he gave me some medicine, but didn't do any good. We have been having Cuticura Remedies in the house, so I decided to try them. I had been using Cuticura Soap, so I got a box of Cuticura Ointment, and washed off the affected part with Cuticura Soap three times a day, and then put the Cuticura Ointment on. The first day I put it on, it relieved me of itching so I could sleep all that night. It took about a week, then I could see the scab come off. I kept the treatment up for three weeks, and my eczema was cured."

"My brother got his face burned with gunpowder, and the used Cuticura Soap and Ointment. The people all thought he would have scars, but you can't see that he ever had his face burned. It was simply awful to look at, but he used Cuticura Soap and Cuticura Ointment are sold by druggists and dealers everywhere, a liberal sample of each, with a 32-page booklet on the skin and hair, will be sent, post-free, on application to Foster Drug & Chem. Corp., Dept. 173, Boston.



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