

## ROAD MAINTENANCE.

ETERNAL VIGILANCE AN IMPORTANT FACTOR IN IMPROVING HIGHWAYS.

Neglecting Them Causes Most of the Trouble—Duties of Road Commissioners—Best Use For Road Machines—Where Shade Is Helpful.

The late J. Q. Sanford, state highway commissioner of Vermont, was insistent on the maintenance of the roads, says Good Roads Magazine, and in one of his last circulars to the local commissioners he said:

The great roadmaster John L. Macadam said, "A good road is an artificial floor, forming a strong, smooth, solid surface, capable of carrying great weight and over which carriages may pass without impediment." In building roads we strive to approximate this ideal.

A high authority on road matters recently said, "The time to begin road repairs is the day the road is finished." If good roads are maintained there must be eternal vigilance. Keeping everlastingly at it is the only way. Roads deteriorate constantly and sometimes rapidly when left alone. It is neglecting the roads that causes most of the trouble. How seldom do we see any one upon the roads doing small work to prevent greater!

We should get away from the old notion, rather habit, of working the roads once a year. We have repeatedly recommended that road commissioners appoint men in various parts of the town, each to care for a section of road and doing the slight work which, if done at the right time, saves the road and keeps it good. The proposition has been misunderstood, some taking it to mean that each appointed man was to maintain and work his section of road in his own way. Not so. The road commissioner is the man of authority throughout the town, and he should direct road affairs in every part of the town at all times. As he cannot be everywhere present, he should exercise his will through others who will do his bidding for the pay and encouragement they receive.

Too much dependence is placed upon the road machine in maintaining the old wornout roads. Often there is more injury than benefit resulting from its use, and there is increasing complaint from the public over the poor returns for the expense. Roads are becoming narrow, the shoulders destroyed, depressions made where water stands to fester and destroy. A good deal is done with the machine that is harmful. Its best use is on the good roads to keep them good. They should frequently be lightly dressed over, always when the road is wet. It saves a lot of good material that is working down into the ditches; it fills the ruts and depressions and keeps the road in good form. The best time for shaping earth roads with a machine is in the spring, while the ground is plastic and easily worked. As a rule, when the earth has become settled, hard and firm the roads should not be broken up. It requires great force to do this in mid-summer, and when broken up they will not be so well settled again that year, the broken surface being dust or mud, according to the weather.

The law requiring road commissioners to remove loose stones from the road once a month is wrong. No road should be neglected for a month. The loose stones are a nuisance and should be removed as often as they appear. Tight stones that project above the road surface should be broken down to the even surface with heavy hammers.

Mudholes are too common, and there is no excuse for their being. They come by growth, which should be prevented. Sand roads are benefited by shade to conserve moisture and keep the road from drying out. Roads of other material need sunlight and air to dry the surface quickly. The borders of a road should be kept well trimmed, and in doing this cleanliness and roadside beauty should be regarded. There is value in our roadside attractions, and beauty costs nothing. A little care and arrangement in what we do will give pleasure to all who pass that way.

Since the rural people are cultivating more of the aesthetic side of life and others of culture, refinement and wealth are establishing their homes in Vermont, road officials should at least preserve the natural attractions and beauty of the roadsides.

### Keeping Roads Good.

A special telegram from Trenton, N. J., to the St. Louis Globe-Democrat says:

The plan announced by State Road Commissioner Hutchinson when he took office—that no further state aid in road building would be extended to those counties which neglected to keep their roads in repair—has been productive of gratifying results. The commissioner says the plan works like a charm. More money is now being appropriated by the counties for road repairing than for building new ones. Monmouth has appropriated \$42,000 for the year, Burlington about the same amount, Essex \$30,000, Passaic \$50,000, and so on. Commissioner Hutchinson regards this as the complete solution of a problem which has for years disturbed the minds of all interested in road improvement.

### Bad Road Tax In Iowa.

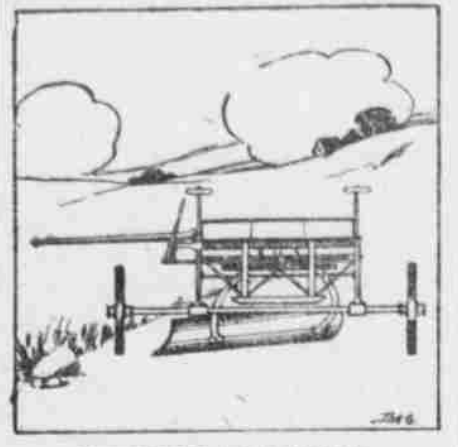
Iowa has 100,000 miles of country roads built on a soil of exceptional fertility and exceptionally deficient in material for hard roads. Iowa raises \$205,000,000 in farm products, each dollar's worth of which must be transported on an average of several miles to the railroad. If it now costs one-half cent on a dollar to do this hauling, and that cost can be reduced to one-fourth cent by improved roads, the farmers of Iowa are paying an annual bad road tax of \$662,500. They are coming to appreciate that this is a poor investment.

## NEW ROAD GRADER.

Reversible Machine to Which Horses Can Be Attached to Either Side.

Road graders are used extensively in the west, not only upon roads, but also upon other stretches of ground where an even grade is desired. An inventor of Oklahoma territory has patented a grader to which horses can be attached to either side, something which has heretofore been impossible, says the Pittsburg Dispatch. For that purpose he uses a rod or chain attached to the side of the framework of the grader and a brace bar, having one end loosely secured to the frame some distance in advance of where the draft rod or chain is attached. The horses are attached to the forward end of this rod.

We show in the illustration the upper framework of a "western reversible



REVERSIBLE ROAD GRADER.

grader," the draft chain or rod being hooked to eyebolts near the end of the side. A brace bar composed of two pieces of gas pipe is secured to the draft rod, one portion being larger and admitting the smaller portion, the adjustment being made by means of a pin. The swingletree is attached to the front of the draft rod, and in operation tends to guide it straight, while the pressure on the blade of the grader when moving earth crowds the rear of the machine away from the earth.

The machine can be adjusted for different grades of ground by lengthening or shortening the draft. Among the advantages are convenient means for attaching horses to the side to assist in propelling the grader and at the same time to prevent it from sliding sidewise, commonly called "crawling" away from the moving earth. Attaching the horses to either side of the grader, the draft being near the rear of the grader, the rear ditch wheel is prevented from climbing and cutting the bank, insuring a clean ditch or furrow. It cannot be upset and will work successfully in loose or sandy soil.

## THE GOOD OLD WAY.

Why It is of Little Use in Modern Road Building.

The Columbus (O.) Journal recently reprinted from its issue of Aug. 7, 1923, this paragraph:

Many gentlemen of this vicinity, feeling the importance of improving the road between Columbus and Granville, are now engaged in circulating subscription papers for labor upon the road, in conjunction with the citizens of Licking county, on the first Friday and Saturday in October next. It is hoped there will be a general turning out for the accomplishment of an object so long pursued.

This was eighty-two years ago. And though every branch of science, industry and business has made almost miraculous advances in that time, the majority of farmers are still working the roads in this "good old way," says Good Roads Magazine.

The barn raising, the quilting party, the husking bee, have been relegated to mythology by scientific economy. Why should this other relic of pioneerism alone remain?

There is poetry about the old time customs, but there is more of music in the telephone bell than in the wolf's howl, more of happiness in the hum of the thrasher than in the pounding of the flail, and more of profit in bowling over a hard road than in racking and creaking and moaning through tire deep mud.

For their own best interest the farmers should be up to date in road building.

### Good Road Maxims.

A good road affords an excellent way to church.

A dollar spent on the road is as good as two spent on the farm.

A community is known by the roads it keeps.

Better go two miles on a good road than half a mile on a bad one.

The wide tire maketh the glad path master.

The country road frighteneth the auto.

A bogged down auto will not go that way again.

A bad road and its travel are soon parted.

Many path masters spoil the roads.

A little gravel is a dangerous thing.

Sow deep or wallow fall and spring.

The horse knoweth the bad road and leteth his ears drop.

Many country roads are paved—with good intentions, but for the most part with lumps of sod, stones, rocks and rubbish.

The wide tire fulfilleth the Scriptures—it maketh the rough places smooth.

The auto is sowing the seeds of a healthy discontent at the condition of hundreds of country roads.

It is always safer passing on a good wide road.—Buffalo News.

### May Repair Old Roman Roads.

There is talk in Great Britain of repairing the old Roman roads for the use of automobiles. It would be a curious fact should the road building of the Romans of the time of Christ be turned to account for the use of our modern vehicle after the lapse of nineteen centuries. The fact that such a thing is considered possible shows that the Romans builded to last.

## SUCCESS OF OILED ROADS.

Rev California Highways Have Been Benefited by Crude Oil.

The sprinkling of roads with crude oil is no longer an experiment in Santa Cruz county, in California, according to statements made to the Watsonville Register by Supervisor J. A. Linscott. The highways treated during the last year and more are the Grimmer road, the roads in the Carlton district, the Hughes or San Andreas road, near the beach, the Larkin Valley road and the Kirkpatrick road.

The largest quantity of oil used to date has been 250 barrels and the smallest quantity 125 barrels, the latter quantity being applied chiefly to unimproved roads for the purpose of laying the dust, it being found cheaper to use oil than water. The oil used has cost 60 cents a barrel. The money comes out of the general fund, as there has not been sufficient money available in the road district fund for the purpose. The total sum in the road district fund last year was \$9,300, and it was used for other purposes.

Mr. Linscott has charge of supervisory district No. 4. He said: "The application of oil to roads saves the roads, lays the dust and prevents washing from winter rains. It has passed the problematical point and has proved a complete success. The oil has worked a semibituminous surface on the roads in most instances where there is considerable travel, the effect being very satisfactory. They look like bituminous roads."

"We are now turnpiking," he continued, "the road at Freedom, graveling it, and will water the center and put oil on the sides. The farmers prefer to have it that way for the present, as there will not be so much trig under the wheels in heavy hauling. There are 100 miles of road in district No. 4, and it is intended to treat all of them with oil, where water cannot be got, as soon as funds can be procured for the purpose."

## EARTH ROADS.

After Being Properly Constructed They Must Be Cared For.

The fact that we have been building roads in one form and another since our country was first opened up and have today but a very small percentage of them that may be called permanent roads makes it evident that it will be many years before the earth road ceases to be, says Good Roads Magazine. An earth road when it is properly constructed and drained is a good road, but to keep it good requires constant care and attention. It is quite out of the question to think that a road once built will take care of itself. In order to lead up to building stone roads communities should first give proper attention to the dirt road. Grades should be established, and if the present road official is, by lack of training or make-up, unfitted for the work of road building his place should be given to one more competent. When, however, a competent official is found he should be kept in office indefinitely.

First of all, road machinery should be purchased in order to get the best results with the least expenditure of money. It is just as absurd to attempt to build roads without proper tools as it would be to go back to the days of the old spinning wheel and scythe. In all parts of the country there is a growing sentiment in favor of changing from the labor tax to the money system. Great progress is being made in this direction, and it will not be long before practically every section of the country will be on the money tax basis.

Then and not till then will the improvement in earth roads become universal.

### Professor Pupin to Build Good Roads.

Professor M. I. Pupin of Columbia college, the inventor of the ocean telephone, who is building a large villa and expending thousands of dollars developing hundreds of acres of rocky and marshy land in Norfolk, N. Y., has offered laborers there \$2 a day for nine hours' work and \$5 a day for teams to work on his place, says the New York Herald. As a road builder Mr. Pupin has few equals, say Norfolk people. First he lays old trees across the roadway to be improved, then a layer of rocks and stones, then the branches of the young trees and lastly a heavy coat of gravel and small stones, which gradually work their way down. The result is a hard and immovable roadbed which the waters cannot tear to pieces.

### Bad Roads Did It.

A farmer lad, so we've been told,  
With a team of horses strong  
Drove down the road with a heavy load,  
While singing his merry song,  
But his mirth in song was not so long,  
For his horses gave a leap;  
As he ran amuck in the mud he stuck  
Clear up to his axles deep.  
BAD ROADS DID IT.

And a wheelman gay went out one day  
For a joyful, merry spin,  
With the weather bright his heart was light  
As he left the country inn,  
But he went not far when he felt a jar  
Which started his troubles and cares,  
He was laid up ill, while the doctor's bill  
Came in with the one for repairs.  
BAD ROADS DID IT.

In an automobile of wood and steel  
A millionaire prim and neat  
Went out for a ride by the river's side  
In a style that was hard to beat.  
But, alas, he found that the broken ground  
And the ruts and the holes so great  
Had smashed a wheel of his automobile.  
What he said we cannot relate.  
BAD ROADS DID IT.

But we're glad to say there shines a ray  
Of hope that will right this wrong.  
When in every state they will legislate  
To help the good roads along.  
The man with his wheel or automobile  
Will never again get the blues.  
And the farmer smiles when traveling miles  
On a road that is fit to use.  
GOOD ROADS WILL DO IT.  
—Harry Ellard in Clackamatt Commercial-Tribune.

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COTTAGE GROVE, ORE.

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### Too Much Glory.

Editor W. L. Thorndyke of the St. John's Review has been adding so many official titles and responsibilities of late to his rank as town seer that even yet he has not fully ascertained just what his real duties are. Thorndyke came from Colorado last summer and with Mr. MeKeon of Seattle revived the Review. Incidentally he built a house and bought another, delved a bit into politics and it is reported, joined a church.

Recently when Judge Hanks, the town recorder, became seriously ill Thorndyke was chosen temporarily to fill the place and report the varied sessions of the council. This week it was decided that he should be appointed deputy recorder and at the next session of the council the nomination is to be ratified. As since May no regular entries have been made in the book of records and miles of resolutions, ordinances and edicts have to be copied into the volume, the task is no light one, but when Thorndyke yesterday discovered that he was poise judge of the town, ex-officio justice of the peace and sole guardian of the matrimonial bureau add shop of justice for a town of 3,000 people, he said things.

Thorndyke freely confesses that he knows nothing about law, he does not want the task of hammering a court to order and settling a dozen neighborhood quarrels in a morning and he sees where the circulation of the Review is going to slide down the scale the first time he endeavors to settle a dispute. But since the honor has been thrust upon him, he is going to run the police court of St. John on model lines.—Journal.

Free with Nugget subscription. The New York Tribune Farmer, a weekly agricultural paper.

If we had a son and he were ever to acquire the office seeking habit, we would borrow a large sized pair of hob nail boots and proceed to kick to frazzles the seat of his Sunday pantaloons. And if that didn't cure him, we would take a slippery elm club and hammer about two gallons of turkey dressing out of his cerebellum. Some men are chronic office holders and if there is a class of men more disgusting it has never been called to our attention.—Odibolt (Iowa) Chronicle.

**BEATS THE MUSIC CURE.**  
"To keep the body in tune," writes Mrs. Mary Brown, 20 Lafayette Place, Poughkeepsie, N. Y. "I take Dr. King's New Life Pills. They are the most reliable and pleasant laxative I have found." Best for the stomach, liver and bowels. Guaranteed by Benson's Pharmacy, 25c.

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Compartment  
Observation  
Cars  
of the

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The privacy of your home—The comforts of a club  
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**FASHION STABLES**  
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## STOMACH TROUBLES AND CONSTIPATION

Chamberlain's Stomach and Liver Tablets are the best thing for stomach troubles and constipation I have ever sold," says J. R. Cullman, a druggist of Pottsville, Mich. They are easy to take and always give satisfaction. I tell my customers to try them and if not satisfactory to come back and get their money, but I have never had a complaint. For sale by The Modern Pharmacy.

## HALF THE WORLD WONDERS

how the other half lives. Those who use Benson's Anion Salve never wonder if it will cure cuts, wounds, burns, sores and all skin eruptions; they know it will. Mrs. Grant, Shy, 1430 E. Reynolds St., Springfield, Ill., says: "I regard it one of the absolute necessities of house-keeping." Guaranteed by Benson's Pharmacy.

Only 25c in addition on your subscription secures the Farm and Country Journal for a year. A journal the size of the Ladies Home Journal and an excellent paper. It has been greatly enlarged and improved recently.

## MAY LIVE 100 YEARS.

The chances for living a full century are excellent in the case of Mrs. Jennie Duman, of Hayneville, N. C., now 70 years old. She writes: "Electric Bitters cured me of Chronic Dyspepsia of 20 years standing and made me feel as well and strong as a young girl." Electric Bitters cure Stomach and Liver diseases, blood disorders, General debility and feeble weakness. Sold on a guarantee at Benson's Pharmacy. Price only 50c.

## CHAMBERLAIN'S COUGH REMEDY ABSOLUTELY HARMLESS.

The fault of giving children medicines containing any injurious substances, is sometimes more disastrous than the disease from which they are suffering. Every mother should know that Chamberlain's Cough Remedy is perfectly safe for children to take, it contains harmful and for coughs, colds and croup is unsurpassed. For sale by The Modern Pharmacy.

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Surest and Quickest Cure for all THROAT and LUNG TROUBLES, or MONEY BACK.

## ARRIVAL AND DEPARTURE OF S. P. TRAINS.

NORTH BOUND SOUTH BOUND

No. 12 ..... 11:53 p.m. No. 11 ..... 8:05 p.m.  
No. 16 ..... 3:55 a.m. No. 15 ..... 2:24 a.m.

## O. & S. E. R. R. CO.

Time Table No. 4  
To take effect April 24, 1905.

East Bound	Sand Tuesday and Sat only	W. Bound
No. 2	No. 1	No. 2
No. 3	No. 4	No. 3
2:07 P.M.	11:19 A.M.	5:15 P.M.
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