

# GRAVEL VERSUS CONCRETE ROAD

Each One Best In Its Proper Place, Says Expert.

## BUILDING METHODS BETTER.

For All Kinds of Country Traffic the Gravel Highway is Excellent, but it is Impracticable in Suburban Towns. Lasts Five Years.

By FRANK F. ROGERS, State Highway Commissioner of Michigan.

Farmers who have been building the old fashioned gravel roads in counties where the traffic is not great need not lose any sleep for fear that they have been doing the wrong thing. A gravel road is plenty good enough for all ordinary country traffic.

Wayne county, Mich., has the most elaborate and extensive system of concrete roads in the world. The tests of the state highway commission were made just outside the city limits of Detroit on several roads and also on the county line, from a dozen to a score of miles farther out. The result was very good news for the ordinary road builder, who haven't a fortune to spend on the work, but bad news for the manufacturers of concrete making machines.

A three months' daily count of the vehicles on a road just outside Detroit gave an average of 2,100 daily. At the county line the average was only slightly in excess of 300. At the county line the road was gravel and withstood that much traffic with practically no damage. As Wayne county has almost three quarters of a million people and a correspondingly large traffic, the deduction is that in the vast majority of counties in the United States gravel roads will serve all necessities for many years to come.

But a gravel road near Detroit would be worse than useless. Wayne county is not making a mistake in building concrete roads. Neither will any other

these cases. Roads are good to foundation substances such as clay, wood or uncrushed rock having been tamped in the concrete when it was soft. It is thus shown that no one kind of road is good for all conditions. The concrete road and the gravel road are the extremes of roads good enough to be called good. There are other kinds of intermediate quality of resistance to traffic. The kind that ought to be built in any locality depends upon the amount of traffic they will have to sustain and the cost of getting the material there. The latter item might be so great as to fall to justify the kind of road which other circumstances would call for. The soil and the drainage must be considered. Concrete roads are easily and inexpensively repaired. The method is to pour tar in the cracks and holes and sift sand over it. This patching seems to be permanent and costs from \$30 to \$100 per mile.

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## DETAILS OF ROAD MAKING.

Construction, Maintenance and Waterways Are Difficult Problems.

"Of all the factors which go to make up the perfect macadam road," says Logan Waller Page, "there is undoubtedly none more potent than that of the suitability of the material which enters its construction. There are two ways in which the engineer may avail himself of the information necessary to a proper selection of road material. The first and only certain one is to make an actual service test on the material under observation and under the same conditions of traffic and climate to which the proposed road will be subjected. The second method is by means of short time laboratory tests to approximate as nearly as possible the destructive agencies to which the material will be subjected on the road."

A properly designed waterway structure should fulfill the following requirements: Waterway sufficient to carry off promptly the water coming to it; proper foundations to bear the loads, resist undermining and give long service; superstructure designed to bear for a long period of years any load which may legally be imposed upon it, and so constructed as to serve the comfort and convenience of travel and economy of maintenance.

## FLAGS FOR ROAD PATROL.

European Plan Adopted to Keep Highway Repairers at Work.

Eight hundred white flags inscribed "S. H. D. Patrol" are flying on the highways of New York state, marking the places where the men engaged in repairing roads are at work, according to a plan of Commissioner of Highways John N. Carlisle. Many complaints have been made regarding the failure of patrolmen to care properly for the highways, and under the new plan Commissioner Carlisle hopes to make the patrol service more effective. The flag system has been adopted from the European countries, where the maintenance of highways has become more of an exact science than it is in America. The display of the little white flags along the highways abroad has had the effect, Commissioner Carlisle says, of making patrolmen more efficient, as the failure on the part of the citizens of those countries to see the flags usually is reported to headquarters.

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Babies and Sleep. Infants cannot sleep too long, but may be deprived of needed rest if placed in light rooms or awakened by noises. Nothing so unmerited the child as lack of rest, and the health may be permanently ruined if it does not sleep the fourteen hours or more that it should.

Help Expected. "Your salary isn't enough to support my daughter."

"I'm glad you've come to that conclusion so early, sir."—Boston Transcript.

Just So. Crawford—"To do a thing well, you know, you must do it yourself. Crabshaw—But you miss the fun of seeing the other fellow work.—Judge.

No Rivals. Nell—He says he has never had a rival in love. Belle—I suppose not. He has always been in love with himself.—Philadelphia Record.

There is no possible success without some opposition as a telegram.—Oliver Wendell Holmes.

Practical. "Do you believe in love at sight?" "Yes; if you can build on the site."—Baltimore American.

# Daily Christmas Hint

The Bride Will Think This Centerpiece Lovely

The bride who has just gone to housekeeping and is collecting a supply of table linen to add to her trousseau stock will appreciate the centerpiece shown in the cut.

The material used is a grayish tan crush of a soft pliable quality.

The conventional design, which is not unlike that of a pansy flower, is



CENTERPIECE WITH CLAY EDGE.

carried out in the present instance with shaded embroidery silk in deft blues, but to get the holiday spirit into the gift Christmas shades of red might be used with fine effect.

The face coloring of the centerpiece is of clay colored to match the linen.

COUNTY COURT.

(Continued from page 6.)

Oregon City Enterprise	128.55
Wild Animal Bounty	
Robert Puts	3.00
Juvenile Court	
D. E. Frost	6.10
Minda E. Church	45.50
Tax Rebate	
Harry M. Courtright	88.34
Harry M. Courtright	14.72
Harry M. Courtright	65.50
Harry M. Courtright	9.21

## Wants, For Sale etc.

WE have money to lend on farms. \$2000 for one loan and money for two other loans of \$1000 each. Interest 7 percent.

UREN & SCHUEBEL  
Choice hop roots for sale, \$3.50 per thousand. A. McConnell, Aurora, Route 3.

Summons. In the Circuit Court of the State of Oregon, for Clackamas County.

May N. Hardin, Plaintiff, vs. Arthur A. Hardin, Defendant. To Arthur A. Hardin, above named defendant.

For a decree dissolving the bonds of matrimony now existing between the plaintiff and defendant. This summons is published by order of Hon. H. S. Anderson, Judge of the County Court, which order was made on the 18th day of Dec., 1913, and the time prescribed for publication thereof is six weeks, beginning with the issue dated, Friday, Dec. 19th, 1913, and continuing each week thereafter to and including Friday, Jan. 30th, 1914.

Summons. In the Circuit Court of the State of Oregon, for Clackamas County.

To Rudolph Jacobs, Defendant. To Rudolph Jacobs, the above named defendant.

In the name of the State of Oregon, you are hereby required to appear and answer the complaint filed against you in the above named suit, on or before the 9th day of Jan., 1914, said date being the expiration of six weeks from the first publication of this summons, and if you fail to appear or answer said complaint, for want thereof, the plaintiff will apply to the court for the relief prayed for in her complaint, to-wit: For a decree dissolving the bonds of matrimony now existing between the plaintiff and defendant. This summons is published by order of Hon. H. S. Anderson, Judge of the County Court, which order was made on the 24th day of Nov., 1913, and the time prescribed for publication thereof is six weeks, beginning with the issue dated, Friday, Nov. 25th, 1913, and continuing each week thereafter to and including Friday, Jan. 31st, 1914.

Summons. In the Circuit Court of the State of Oregon, for Clackamas County.

To Zilphla Holdaway, John E. Davis, Myrtle Rankin, Ardella Close, Blanche Watson, Mima Colson and Gladys Davis, Greeting:

You are hereby cited and required to appear in the County Court of the State of Oregon, for the County of Clackamas, at the Court room thereof, at Oregon City, in the County of Clackamas, on Wednesday the 14th day of January, 1914, at 10 o'clock in the forenoon of that day, then and there to show cause if any there be, why a certain petition in writing, presented to the said county court and now on file therein, should not be granted, directing the administrator of the following described land, to-wit: Beginning at a point 610 chs. N. and 8.32 chs. W. of the corner of Sections 10, 11, 14 and 15, in T. 2 S., R. 2 E. of the W.B. Mer. Clackamas County, Oregon, thence south 26.10 chs.; thence east

11.49 chs.; thence North 26.10 chs. and thence West 11.49 chs. to the place of beginning, containing 30 acres, more or less, for the purpose of raising money to pay the debts and claims against said estate and the doctor's bills as set out in the petition on file herein.

This Citation is published by order of Hon. H. S. Anderson, Judge of the above named court which said order was made and entered on the 3rd day of December, 1913, and the time prescribed for publication thereof is four weeks, beginning with the issue of Friday, Dec. 5th, 1913, and continuing each week thereafter to and including the issue of Friday, Jan. 2nd, 1914.

Witness, the Hon. H. S. Anderson, Judge of the County Court of the State of Oregon, for the County of Clackamas, with the seal of said court affixed this 3rd day of Dec., A. D., 1913. Attest: W. L. Mulvey, Clerk.

Summons. In the Circuit Court of the State of Oregon, for the County of Clackamas. John C. Hanken, Plaintiff, vs. Cora Hanken, Defendant. To Cora Hanken, the above named defendant:

In the name of the State of Oregon, you are hereby required to appear in the above entitled Court and answer the complaint filed against you in this suit on or before Monday, the 15th day of January, 1914, that being six weeks from and after the date of first publication of this summons, and also being the last day prescribed by the order of the Court for your appearance herein, and if you fail to so appear or answer the complaint on or before said date, for want thereof the plaintiff will take default against you and apply to the Court for the relief prayed for in the complaint, to-wit, for a decree declaring the marriage between plaintiff and defendant here in void, and annulling the same, and for such other and further relief as in equity and good conscience plaintiff is entitled to in the premises.

This summons is published in the Oregon City Enterprise in pursuance of an order of the Hon. J. U. Campbell, Judge of the above entitled Court, duly made and entered on the 1st day of December, 1913. Dated and first published Friday, December 5, 1913.

Summons. In the Circuit Court of the State of Oregon, for Clackamas County.

Floyd A. Williams, Defendant. To Floyd A. Williams, the above named defendant.

In the name of the State of Oregon, you are hereby required to appear and answer the complaint filed against you in the above entitled Court on the 16th day of January, A. D., 1914, said date being six weeks after the first publication of this summons, and if you fail to appear and answer, the plaintiff will apply to the Court for the relief prayed for in her complaint, to-wit: For a decree dissolving the bonds of matrimony now existing between the plaintiff and defendant. This summons is published by order of Hon. H. S. Anderson, Judge of the County Court, which order was made on the 15th day of Dec., 1913, and the time prescribed for publication thereof is six weeks, beginning with the issue dated, Friday, Dec. 19th, 1913, and continuing each week thereafter to and including Friday, Jan. 30th, 1914.

Summons. In the Circuit Court of the State of Oregon, for Clackamas County.

Charles T. Tooze, Plaintiff, vs. W. P. Jacks, Charity B. Jacks, Walter B. Odale, M. M. Diel and W. L. Diel, Defendants. To W. P. Jacks, Charity B. Jacks, Walter B. Odale, M. M. Diel and W. L. Diel, Defendants:

and in compliance with the commands of said writ, I will, on Saturday, the 10th day of January, 1914, at the hour of 10 o'clock A. M., at the front door of the County Court House in the City of Oregon City, in said County and State, sell at public auction, subject to redemption, to the highest bidder, for U. S. gold coin cash in hand, all the right, title and interest which the within named defendants or either of them, had on the date of the mortgage herein or since had in or to the above described real property or any part thereof, to satisfy said execution, judgment order, decree, interest, costs and all accruing costs.

Witness, the Hon. H. S. Anderson, Judge of the County Court of the State of Oregon, for the County of Clackamas, with the seal of said court affixed this 3rd day of Dec., A. D., 1913. Attest: W. L. Mulvey, Clerk.

Summons. In the Circuit Court of the State of Oregon, for Clackamas County. Luella Williams, Plaintiff, vs. Floyd A. Williams, Defendant.

In the name of the State of Oregon, you are hereby required to appear and answer the complaint filed against you in the above entitled Court on the 16th day of January, A. D., 1914, said date being six weeks after the first publication of this summons. If you fail to appear and answer, the plaintiff will apply to the Court for the relief prayed for in her complaint, to-wit, for an absolute divorce, alimony for plaintiff and maintenance for the minor child, custody of the minor child, and for such other and further relief as to the Court may seem meet and equitable, and for her costs and disbursements herein.

You will please take notice that this summons is served upon you personally, with a certified copy of the complaint, pursuant to the terms of an order in the above entitled Court by the Honorable J. A. Eakin, Judge thereof, on the 2nd day of December, A. D., 1913, requiring that publication of this summons be made once a week for six consecutive weeks in the Oregon City Enterprise, and requiring that the first publication be made on the 9th day of December, A. D., 1913, and the last publication on the 16th day of January, A. D., 1914.

Notice to Creditors. In the County Court of the State of Oregon for the County of Clackamas.

In the Matter of the Estate of Thomas F. McCabe, Deceased.

Summons. In the Circuit Court of the State of Oregon, for the County of Clackamas.

Creolia Anoa Jenetta Newell, Defendant, vs. Vincent Newell, Plaintiff.

In the name of the State of Oregon: You are hereby notified and required to appear and answer the complaint of the plaintiff in the above entitled Court and cause on or before the 22nd day of January, 1914, and if you do not so appear and answer, the plaintiff will apply to the court for the relief prayed for in the complaint, to-wit: For a decree dissolving the bonds of matrimony heretofore and now existing between plaintiff and defendant.

Summons. In the Circuit Court of the State of Oregon, for Clackamas County.

PROFESSIONAL DIRECTORY  
Harvey E. Cross  
William Hammond  
**CROSS & HAMMOND**  
ATTORNEYS-AT-LAW  
We have now moved to our permanent quarters in the Beaver Building, Next to the Anderson Building.  
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Loans, Insurance.  
Main Street, Oregon City, Ore.

**JOSEPH E. HEDGES**  
Lawyer  
MONEY TO LOAN  
WEINHARD BUILDING

alized upon said sale shall be applied to the payment of the plaintiff's costs and disbursements of this suit, plaintiff's attorneys fees, and the amount found due plaintiff in any decree obtained by virtue of this suit, and that plaintiff have such other and further relief as the court may deem meet and equitable.

Summons. In the Circuit Court of the State of Oregon, for the County of Clackamas. John C. Hanken, Plaintiff, vs. Cora Hanken, Defendant.

Summons. In the Circuit Court of the State of Oregon, for the County of Clackamas.

Final Notice. Notice is hereby given that the undersigned has filed his final account as Administrator of the estate of Peter Rediger, deceased, with the County Clerk of Clackamas County, Oregon, and the Court has set Monday, the 22nd day of December, 1913, at the hour of 10:00 o'clock A. M. in the County Court room in the Court House, in Oregon City, Oregon, as the time and place for hearing any and all objections to said final report and the discharge of this Administrator.

Summons. In the Circuit Court of the State of Oregon, for Clackamas County.

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of Oregon City, Oregon  
CAPITAL, \$500,000.00  
Transacts a General Banking Business. Open from 9 A. M. to 3 P. M.

Citation. In the County Court of the State of Oregon, for Clackamas County.

Sheriff's Sale. In the Circuit Court of the State of Oregon, for the County of Clackamas.

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