

# SURFACING OF COUNTRY ROADS

Problems That a Highway Engineer Must Solve.

## THREE TYPES OF TOP DRESSING

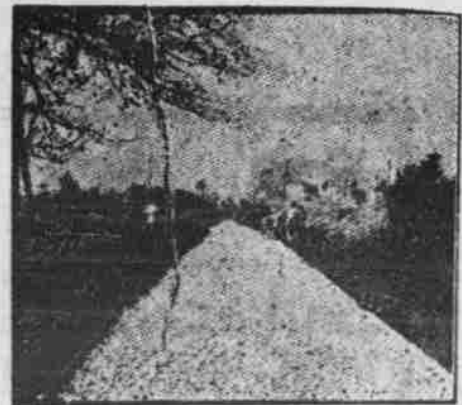
Sand-Clay, Gravel and Macadam the Materials Used—Character of Rocks Suitable For Building Macadamized Roadways Must Be Known.

In an address recently delivered before the Appalachian Engineering association at Winston-Salem, N. C., Dr. Joseph Hyde Pratt, president of the Appalachian Good Roads association, spoke as follows on the surfacing of roads:

"The question of surfacing material for a road is one that is causing road builders considerable trouble, for with the introduction of the automobile, the wear and tear on our public roads, especially of the surfaced roads, is very materially increased. It is not due to the automobile alone, but to a combination of the cutting action of the narrow iron tires of heavy wagons and the suction of the rubber tires of the automobiles. The iron tire has a cutting and grinding action which reduces the surface of the road to a powder and loosens up small fragments, which are readily lifted up and thrown to one side by the suction power of the rubber tire of the automobile. The iron tire alone or the automobile alone would not do such great damage, for the material ground up by the iron tire acts as a protection for the surface of the road beneath it and remains as such protection until blown off by the wind or washed off by heavy rains. When removed, however, the iron tire at once comes in contact with the stone surface of the road and begins to wear it out. The automobile alone would not do anywhere near as much damage to the public roads, as the suction power of the tires would not seriously affect the well surfaced road. It is the combination of the two, however, that causes the great damage that is laid to the automobile.

"For country roads there are three types of surfacing material in use—macadam, sand clay and gravel.

"In considering a macadam road the road engineer has many problems to solve. He must not only be fa-



MACADAM ROAD CONSTRUCTION. (From Southern Good Roads, Lexington, N. C.)

amiliar with the method of construction of the macadam road, but he must also know when it is possible to use a thinner layer of stone, thus reducing the cost of construction. He also must be so familiar with this type of road that he will not make a mistake of using too thin a coating of macadam. According to the character of the subsoil and the hardness of the roadbed, the thickness of the macadam will vary from four inches to ten inches. The cost of a four inch macadam is so much less than a ten inch that an engineer will wish to use it as often as possible, and there is often a tendency to use the thin coating where the thicker one would give better results.

"The character of rocks suitable for use in the construction of a macadam road must also be known to the road engineer for the reason that many rocks are not at all adapted for this purpose on account of their softness and lack of minerals that make a good binding surface. The best rocks for this purpose are trap, diabase and gabbro. These rocks are all basic in character and when used as a top dressing for macadam give the very best binding qualities. Many other rocks, as granite, gneiss, quartzite, limestone, etc., have to be used on account of the inaccessibility of rocks of the other type. There is a great variation in granites and gneisses in their chemical composition, those which contain a great deal of hornblende giving the best results in the construction of macadam roads. They are, however, rather soft and wear down quickly if the traffic is very heavy. The limestone, although a soft rock, has exceptionally good binding qualities and makes a good macadam road, but one that has to be watched constantly.

"The sand clay road which is coming into general use throughout many of the southern states is one that the road engineer must know how to build. In some instances this road can be built to better advantage than macadam and will give just as good results. All sand or all clay will not make good sand clay roads, and in building this type of road both the sand and the clay must be tested as to its adaptability to use for this purpose."

# TREATMENT OF THE SICK HORSE.

While few are justified in attempting to treat a horse that is really sick, yet every farmer ought to be able to do something for a sick animal till professional help can be obtained. Improper feeding produces much digestive sickness in horses.

Now, a horse with an acute attack of indigestion is in the utmost need of veterinary help. There is not much use of pouring medicine into the stomach. As that organ is in a deranged condition, no assimilation of anything put into the stomach takes place, and consequently no action is obtained by administering drugs through the mouth.

The injection of concentrated medicines under the skin is the only rational way of treating such cases. No ordinary farmer has either the instruments or skill to do this. But the sick animal should be placed in a roomy box stall plentifully supplied with bedding, and a careful man should be with him to prevent, as far as possible, the patient from injuring itself when the pains are very intense.

Many a horse suffering great pain has thrown itself down violently on a hard floor and ruptured the stomach (which has been distended with gas), and thus destroyed whatever chance there might have been of successful treatment.

It always gives some relief to cases where there is great abdominal pain to take cloths wrung out of a pot of hot water and apply as hot as the patient will stand to the lower part of the abdomen. This is usually easily done, as the animal is in almost every case lying down and in many cases lying on his back. Much can be done in this way to keep the patient from injuring itself till veterinary help can be secured.

Horses suffer more from pulmonary diseases in the winter than in the summer, because the stables are not in many cases ventilated sufficiently. Poor ventilation predisposes to lung trouble, and many a simple cough or cold develops into inflammation of the lungs just because the afflicted animal is standing in a poorly ventilated stable. The average case of influenza or even colt distemper will not need very

## Station Gardening on the C. P. R.

N. S. Dunlop, superintendent of the floral department of the Canadian Pacific railroad, recently started to send out a circular to station agents and section men all over the system, offering a number of prizes with a view to encouraging gardening around stations and section houses. Each general superintendent will award a prize of \$25 to the station agent having the best flower garden and neatest ground, and there will be prizes of \$10 and \$5 for locomotive foremen and also for section foremen. In addition, each superintendent will give a prize of \$10 and a second prize of \$5, while a first prize of \$10 and a second prize of \$5 will be awarded on each general superintendent's division for the best photograph of a flower garden at a station on the division.

## Excellent Sweeping Ordinance.

An ordinance that would be of great benefit to any town has been passed in Columbus, Ind., making it unlawful for any person, firm or corporation to sweep dust, dirt, refuse or any accumulations from any building or from any premises to any sidewalk, gutter, street or alley. Instead, the sweeping must be done to the rear and the sweepings then gathered up, placed in a receptacle and left for the garbage collectors to remove. The local board of health fathered the ordinance and it was aimed at business houses where clerks were in the habit of sweeping into the public streets.

# Plan Railroad Day

(Continued from page 8)

ing of an entirely new section of the country

Mr. Hill was entertained by the Commercial Club of Madras, on his visit through Central Oregon last summer, at a regular old-fashioned country picnic and that he showed his appreciation of the occasion was well understood at this time, and since, it is noted that he has spoken very favorably of this section of Central Oregon.

The people of all Crook County and Central Oregon are given the heartiest invitation to be present at the Madras Railroad Celebration, which will be the great day that the residents have been looking forward to for years.

## New Laws Proposed

Representatives Belknap and Thompson have introduced a bill which proposes a uniform basis for computing the salary of county school superintendents of the state. The bill provides that the salary of the school superintendent of each county shall be \$1,000, and in addition thereto \$100 for every 1,200 children in his county, as shown by the last annual school census. No superintendent is to receive a salary in excess of \$2,500.

An appropriation of \$150,000 is recommended by the House committee on capital buildings and grounds for the construction of the state house grounds, cost of the buildings, of a building of sufficient size for the accommodation of the state library, the supreme court, the library commission, the railroad commission and the attorney general.

**WILL TRADE**—Good R. equipment near Madras for city lots or stock. See Barnett.

## Notice For Publication

Department of the Interior, U. S. Land Office at The Dalles, Oregon, January 21, 1911. Notice is hereby given that

Margaret Mathers,

of Youngs, Oregon, who, on January 13, 1906, made Homestead, No. 14908, Serial No. 05792, for n<sup>o</sup> 1<sup>st</sup> Sec 15, T. 11 S., R. 13 E., W. M., has filed notice of intention to make final five-year proof, to establish claim to the land above described, before Howard W. Turner, U. S. Commissioner, at his office at Madras, Oregon, on the 6th day of March, 1911. Claimant names as witnesses: Snowden W. Itte, Alfred Turner, L. A. Young and Nancy White, all of Madras, Oregon. C. W. MOORE, Register.

## Notice For Publication

Department of the Interior, U. S. Land Office at The Dalles, Oregon, Jan. 23, 1911. Notice is hereby given that

Alfred T. Martin,

of Youngs, Oregon, who, on June 10, 1904, made Homestead, No. 13596, Serial No. 03222, for L. 1, 2, 3, 4, and 5<sup>th</sup> Sec 4, T. 10 S., R. 14 E., W. M., has filed notice of intention to make final five-year proof, to establish claim to the land above described, before Howard W. Turner, U. S. Commissioner, at his office at Madras, Oregon, on the 6th day of March, 1911. Claimant names as witnesses: George E. Laughlin, of Youngs, Oregon; George E. White, John Thomas, Alfred Wild of Madras, Oregon. C. W. MOORE, Register.

# BLACKSMITHING

WOOD AND IRON WORK

The best equipped shop in Central Oregon  
FIRST-CLASS WORKMEN EMPLOYED

HORSESHOEING A SPECIALTY  
**STANLEY GRAY, PROP.**  
MADRAS, OREGON

# Automobile Stage Line

ALL NEW STUDEBAKER AUTOS

Shaniko, via Madras To Bend

**DAILY TRIPS EACH WAY**

The Best Accommodations For All Passengers

FOR RATES APPLY AT STAGE OFFICE

**Cornett Stage & Stable Co.**

## LIVE MERCHANTS ADVERTISE

The merchant who is trying to carry on a business in this day and age without advertising is only equalled by the fellow who prefers to use candles instead of modern electric or gas lights. The man is as far behind the times in one as the other.

The people nowadays study the advertisements to see whether the merchant or business man has anything worth telling about. If he does not call attention to his establishment they pass it by.

## Notice For Publication

Department of the Interior, U. S. Land Office at The Dalles, Oregon, January 16th, 1911. Notice is hereby given that

NICHOLAS MONNER,

of Madras, Oregon, who, on January 8th, 1906, made Homestead, No. 14890, Serial No. 13783, for n<sup>o</sup> 1<sup>st</sup> Section 26, T. 9 S., R. 13 E., W. M., has filed notice of intention to make final five-year proof to establish claim to the above described, before Howard W. Turner, U. S. Commissioner at his office at Madras, Oregon, on the 28th day of February, 1911.

Claimant names as witnesses: Charles F. Kinn, Alfred H. Parkoy, William Brown and George Monner, all of Madras, Oregon. C. W. MOORE, Register.

## Notice For Publication

Department of the Interior, U. S. Land Office at The Dalles, Oregon, Dec. 20, 1910. Notice is hereby given that

Addie C. South, formerly

Addie C. Attridge,

of Culver, Oregon, who, on October 14, 1909, made Homestead No. 05413 for 1/2 Sec 19, Township 12 S., R. 14 E., W. M., has filed notice of intention to make final commutation proof, to establish claim to the land above described, before Howard W. Turner, U. S. Commissioner, at his office at Madras, Oregon, on the 2nd day of February, 1911.

Claimant names as witnesses: S. S. Brown, James Brown, Glenn Ridway, William E. Hawk, all of Culver, Oregon. C. W. MOORE, Register.

## Notice For Publication

Department of the Interior, U. S. Land Office at The Dalles, Oregon, November 25, 1910. Notice is hereby given that

JOHN REICHEN

of Madras, Oregon, who, on December 1, 1905, made Homestead Entry, No. 4825, Serial, No. 03753, for n<sup>o</sup> 1<sup>st</sup> Sec 23, T. 11 S., R. 13 E., W. M., has filed notice of intention to make final five-year proof to establish claim to the land above described, before Howard W. Turner, U. S. Commissioner at his office at Madras, Oregon, on the 14th day of January, 1911.

Claimant names as witnesses: Jake S. M. Irving, Theodore Ricker, William Fiehlman and R. J. Strasser, all of Madras, Oregon. C. W. MOORE, Register.

12-15 C. W. MOORE, Register.

## LUMBER FOR SALE

We are manufacturers of high grade lumber, both pine and fir. We have on hand first-class flooring, shiplap and rustic. Wood and slabs in any quantity. Our prices are right.

WALLENBURG & FARRER,  
Grizzly, Oregon.

Mill on Coon Creek, three miles east of Grizzly. Leave orders for lumber with Bert Wintears, Madras, Oregon. 18-11

## Isolated Tract.

Public Land Sale No. 06777. United States Land Office, The Dalles, Oregon, Dec. 31, 1910. Notice is hereby given that, as directed by the Commissioner of the General Land Office, under provisions of Act of Congress approved June 27, 1906, Public Law No. 303, we will offer at public land sale, to the highest bidder, at 9:45 o'clock a. m., on the 13rd day of February, 1911, at this office, the following tract of land, to-wit: 1/2 Sec 18, T. 10 S., R. 14 E., W. M. Any persons claiming adversely the above-described lands are advised to file their claims, or objections, on or before the day above designated for sale. U. W. Moore, Register. 12-116

## Isolated Tract.

Public Land Sale No. 06772 U. S. Land Office The Dalles, Oregon, January 13th, 1911. Notice is hereby given that, as directed by the Commissioner of the general Land Office, under provisions of Act of Congress approved June 27, 1906, Public Law No. 303, we will offer at public sale to the highest bidder, at 9:30 o'clock a. m., on the 3rd day of March, 1911, at his office, the following tract of land to-wit: Lot 3, (n<sup>o</sup> 1/2 Sec 30, T. 10 S., R. 14 E., W. M.).

Any persons claiming adversely the above-described lands are advised to file their claims or objections, on or before the day above designated for sale. C. W. Moore, Register.

## Notice For Publication

Department of the Interior, U. S. Land Office at The Dalles, Oregon, Dec. 29, 1910. Notice is hereby given that

John R. Bayless,

of Ashwood, Oregon, who, on February 5, 1904, made Homestead, No. 13222, Serial, No. 03081, for 1/2 n<sup>o</sup> 1<sup>st</sup> Sec 19 and 1/2 Sec 20, T. 10 S., R. 13 E., W. M., has filed notice of intention to make final five-year proof, to establish claim to the land above described, before Howard W. Turner, U. S. Commissioner at his office at Madras, Oregon, on the 8th day of February, 1911. Claimant names as witnesses: Charles D. McCollum, Milo Wood, Earnest Wood, and James Brown, all of Ashwood, Oregon. C. W. Moore, Register.

12-12 C. W. Moore, Register.

# Guess Now

On the time that first railroad engine reached Culver Junction

If your guess wins the first prize you get a check for \$300.00. If you win the second prize you get a \$200.00; 3<sup>rd</sup> prize \$100.00; 4<sup>th</sup> and 5<sup>th</sup> prizes \$50.00, and twelve \$25.00 prizes. These checks are payable in cash. We want the amount mentioned but must be used to purchase of lots in CULVER JUNCTION. We want you to study the railroad situation in Central Oregon and learn the location of Culver Junction on the railroad. You will then know that this town will be reached by the railroad within a very few weeks. The Oregon Trust was completed within 17 miles of our town and the Harriman line was about the distance. When you investigate Culver Junction you will find that this town will serve the largest agricultural section along the new line. Also that the railroad company recognizes the fact and have the largest warehouse frontage for the handling of tonnage of any of the towns in Central Oregon.

# Culver Junction

Is a wideawake, progressive town; now a lumber yard, good hotel, public school, two general merchandise stores will be in operation Feb. 1, also livery barn, feed store and blacksmith shop. A machine shop, office, real estate office and is also headquarters for the Central Oregon Well Company.

Read conditions of contest as outlined in preceding advertisement and cut out coupon below forward to us with your application for lot.

## Deschutes Valley Land & Investment Company

CULVER, OREGON

My guess on date of first railroad engine reaching

**Culver Junction**

is the \_\_\_\_\_ day of \_\_\_\_\_

1911, at the hour of \_\_\_\_\_ o'clock and \_\_\_\_\_

minutes in the \_\_\_\_\_ noon.

I enclose \$10.00 to apply on purchase price of lot to be selected by me and you may mail me marked up plat and price list to the address below. It is understood that this entitles me to a guess for one of your valuable prizes mentioned in the advertisement.

NAME \_\_\_\_\_

POSTOFFICE \_\_\_\_\_

STATE \_\_\_\_\_

# OREGON

The Last Call

Did you see this beautiful picture of Oregon in our magazine SUNSET?

\$25,000 IS BEING SPENT ON A SUPERBLY ILLUSTRATED MAGAZINE containing the best serial novel of the year, "SPELL," by C. N. A. M. and a superbly illustrated color story "SAN FRANCISCO EXPOSITION CITY," which we will include a copy of the issue containing the beautiful picture of Oregon.

WONDERLAND OF THE WEST

We will send you the best of SUNSET commencing with the special December issue of the best serial novel of the year, "SPELL," by C. N. A. M. and a superbly illustrated color story "SAN FRANCISCO EXPOSITION CITY," which we will include a copy of the issue containing the beautiful picture of Oregon.

ALL FOR 25 CENTS (SUNSET)

SUNSET MAGAZINE

WELLS FARCO BROS.

PORTLAND, OREGON

Content Notice

Department of the Interior, U. S. Land Office, The Dalles, Oregon, December 30, 1910. A notice of intent to have a contest against homesteaders on the 60118 acre Feb. 23, 1911.

Sec 6, T. 10 S., R. 13 E., W. M. Benjamin F. Rippey, on which it is alleged that he has a claim.

F. Rippey has wholly abandoned the claim that said abandoned claimant never had any interest in said place; that absence was not due to his being in the army, navy or in the United States war.

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