

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 familiar 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.



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

"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.

WILLING TO LEND.

Only Her Husband, the Mean Thing, Had Pinched Her Waist

Men have something to learn from women in the art of warding off "touchers" for coin. Women respond to such requests once in about every thousand cases, but they are scientific in their refusals. A Cleveland woman with a reputation as a borrower turned up at the home of one of her friends the other morning with a much done over story about a persistent and threatening dressmaker and the usual request for the loan—"pay it back tomorrow, certain"—of \$5.

"Why, my dear, certainly," was the pleasant response to her carefully rehearsed little yarn, "you poor thing, you! Just wait till I run upstairs and get my purse."

She ran upstairs. The male head of the house happened to be in the room where she kept her purse. He saw her dig the purse out of a chiffonier drawer and deliberately remove a wad of bills from it, leaving about 37 cents in silver and copper in the change receptacle. The man was men enough to lean over the stair railing when his wife went downstairs to the parlor with her flattened pocketbook in her hand.

"Oh, I'm so sorry, dearie," he heard her say, "but I really thought I had the money. I find, though, that Frank, as usual, has been at my purse—I heard him say something about setting a plumber's bill last night when I was half asleep—and the mean thing has left me only enough for car fare. Too bad! Of course, you know, if I had it"—and so on.—Cleveland Plain Dealer.

CURIOUS BLUNDERS.

The Anachronisms That Crowded a Once Famous Poem.

The medieval romances are full of blunders, making contemporaries of men who were separated sometimes by hundreds, sometimes by thousands, of years, but as historical criticism had not then a being and the general information of the age was not superior in any particular to that of the novelist their plans do not amount to much from a literary point of view. Such an instance is the case of Ariosto, who might be supposed to know something at least of the truth of history, but whose once famous poem, "Orlando Furioso," is a tissue of historical absurdities from beginning to end.

In this poem Charlemagne and his peers are joined by Edward I, of England, Richard, earl of Warwick; Clarence and the Dukes of York and Gloucester; canon are employed hundreds of years before the time of Monk Schwartz, and the Moors are represented as established in Spain in spite of the historic fact that 300 years elapsed after the death of Charlemagne before they crossed from Africa. In one place Prester John, who lived 400 years after Charlemagne, and Constantine the Great, who died five centuries before him, are introduced and hold familiar converse with the great Charles, while in another Saladin and Edward the Confessor are joined by the Black Prince.

Audubon and His Hair.

Audubon, the great naturalist, early in his career wore his hair very long. He wrote in his diary one day: "I wear my hair as long as usual. I believe it does as much for me as my paintings." However, in 1827 his friends succeeded in persuading him to get his hair cut according to the prevailing fashion. On March 19 of that year he wrote in his diary: "This day my hair sacrificed and the will of God usurped by the wishes of man. As the barber clipped my locks rapidly it reminded me of the horrible times of the French revolution when the same operation was performed upon all the victims murdered by the guillotine. My heart sank low." Further to express his grief, the margin of the page on which this entry was made he painted black about three-quarters of an inch deep all around.

Still Wondering.

The deaf man got out of the tram-car on to the other line of rails. "Look out! There's a car coming!" cried the conductor. "What?" said the deaf man. "There's a car coming." "What?" Just then the car caught and knocked down the deaf man, and as he picked himself up he said: "I wonder what that fool kept me there talking about!"—London Mail.

Just the Opposite.

An Irishman at a fair got poked in the eye with a stick and took proceedings against the offender. Said the magistrate, "Come, now you don't really believe he meant to put your eye out." "Faith, you're right this time," said Pat. "For I believe he tried to put it farther in."—London Tit-Bits.

The Moral Stimulus of Good Clothes.

Men grow in self respect as they wear good clothes. Their clothes earn them the approval of their fellows. In turn they are forced to grow to fill the measure of good opinion, so that, forced forward by the clothes he wears, men attain to their highest capability.—Sartorial Art Journal.

The Exception.

"Doesn't your husband like cats, Mrs. Binks?" "No, indeed. He hates all cats except a little kitty they have at his 'ub."—Baltimore American.

A man without patience is a lamp without oil.—De Musset.

CAUGHT THE COINER.

An Accident Spoiled an Ingenious Counterfeit Passing Scheme.

A case which shows the ingenuity used in passing counterfeit coin is the following: A tailor, who also was a very successful coiner, had a little daughter who was some ten years old. She was being taught to play the violin, and twice a week she went to have a music lesson at a house about a mile distant. Once a week the innocent little thing carried besides her violin case and viola a package cunningly secreted in the false bottom of the violin case, which contained some twenty or more pieces of counterfeit coin.

The music master, a rogue who was in the know, found no difficulty in abstracting the package unnoticed by the child and in his turn passed it on to a woman "fence," who again gave it to a male friend, who delivered it safely to the "utterer," a woman again, at a street corner, the package being this time concealed in the false bottom of a canary cage. Thus it passed through six hands, and besides the man himself only the music master knew who manufactured the coin.

The tailor was caught by an accident. His little girl let the violin case fall in the street, the bottom of the case was smashed, and all the coins, done up in tissue paper, fell into the street. The child, much mystified, opened one of the little packages, and the glitter caught a policeman's eye. This mishap led to the instant arrest of the tailor, who confessed, hoping for a light sentence, a hope which was not realized. Among the coiner's stock in trade were discovered two works on chemistry, fourteen molds, two batteries, plaster of paris, two ladies, a melting pot, crucibles and a quantity of chemicals.—London Telegraph.

HENTY AS AN INVENTOR.

The Author's Reversible Boat That Was a Halfway Success.

George Henty, the author of boys' stories, is described in "Sixty Years in the Wilderness," by Henry W. Lucy, as the warmest hearted, shortest tempered man in the world.

"Before he found his true vocation in writing boys' books Henty tried various methods of supplementing his salary on the Standard. One was the recovery of tin from broken or disused utensils. For some months his study was filled with a bad smell and scraps of broken tin. The smell was engendered by efforts to melt off the tin from the base metal with the assistance of a chemical compound invented by the operator.

"The next thing that attracted Henty's attention and filled him with hope of fortune was the building of a reversible boat, bound to right itself automatically. He took rooms up the river and, with some assistance from a village mechanic, built his boat. To a certain extent it proved an unqualified success. At the slightest well directed touch, sometimes without it, it would turn over, keel uppermost, with Henty in the river. Righting itself was, as the French say, 'another pair of sleeves.'

"Through some anxious weeks he was frequently ignominiously rescued by a passing boat and walked home, oozing water from pockets and boots. In the end his landlady gave him notice that she could not be 'always mopping up after him.' I fancy he gladly seized this opportunity of retiring from the boat building business."

Stories of the Gravediggers.

Grimly humorous is the tale of the Scottish gravedigger who complained that he did not get constant work.

"But, George," said the minister, "if you were to be constantly employed in the duties of the office you would soon bury the whole parish." "That might be, sir, but how am I to keep a wife and family unless I get regular work? 'Deed, sir, I have buried a leavin' soul for the last six weeks."

Harder still was the case of another gravedigger who was asked to reduce his fee for digging a grave because, "mind ye, James, she was an auld woman and was sair spent."

Malay Houses.

Malay houses are invariably built on posts so as to raise the floor from four to six feet above the ground. The floor is composed of bamboo, with interstices between slats, the earth beneath becoming the receptacle of the drainage of the establishment. The universal plan of the well to do natives is to build the house in two divisions, the front one for receiving visitors and lounging generally, while the rear portion is reserved for the women and children.

City Streets.

Dr. Johnson would have said a wise thing had he said what somebody said later for him—"Come, let us take a walk down Fleet street." It sounds commonplace, but often a commonplace is concentrated wisdom, and that is how in our careless day a master of the commonplace gets to be regarded as an oracle. If you want to understand a people just do take a walk—many walks—in their great highways of traffic.—James Millie in Fortnightly.

A Thorough Optimist.

"You are an optimist?" "I am," replied Mr. Dustin Stax. "I not only hope for the best, but I make practical arrangements to get it."—Washington Star.

Her Words.

His Sister—And did she say she loved you in so many words? Her Brother—That's what! Her words filled twenty-seven pages.—Chicago News.

When given as soon as the croupy cough appears Chamberlain's Cough Remedy will ward off an attack of croup and prevents all danger and cause of anxiety. Thousands of mothers use it successfully. Sold by C. Y. Lowe.

We are Agents for the

Famous Baldwin Pianos

If you are contemplating buying a Piano, give us a call. It costs you nothing to examine them.

Prices \$250 and up Easy Terms

BANDON DRUG CO.

M. G. POHL, Optometrist



2d, 3d and 4th Saturdays at Hotel Gallier, Bandon, Ore.

Clarence Y. Lowe

BANDON OREGON

Druggist and Apothecary

Just in receipt of a new stock of

Drugs and Chemicals, Patent and Proprietary Preparations, Toilet Articles, Drug Sundries, Perfumes, Brushes, Sponges, Soap, Nuts and Candies, Cigars, Tobaccos and Cigarettes, Paints, Oils, Glass and Painter's Supplies.

A Great Clubbing Offer

Semi-Weekly Oregon Journal, one year	\$1.50
Semi-Weekly Bandon Recorder one year	1.50
Total	\$3.00

Both Papers One Year \$2.00

The Semi-Weekly Bandon Recorder

Publishes the best and most complete telegraphic news of the world; gives reliable market reports, as it is published at Portland where the market news can be and is corrected to date for each issue. It also has a page of special matter for the farm and home, an interesting story page and a page or more of comic each week, and it goes to the subscriber twice each week—104 times a year.

The Semi-Weekly Bandon Recorder

Gives all the local news and happenings and should be in every home in this vicinity. The two papers make a splendid combination and you can save \$1 by sending your subscriptions to The Bandon Recorder. We can also give our subscribers a good clubbing offer for the Daily and Sunday, or Sunday Journal in connection with the Semi-Weekly Bandon Recorder.

PATENTS

60 YEARS EXPERIENCE TRADE MARKS DESIGNS COPYRIGHTS & C. Anyone sending a sketch and description may quickly ascertain our opinion free whether his invention is probably patentable. Communications strictly confidential. HANDBOOK on Patents sent free. Oldest agency for securing patents. Patents taken through Munn & Co. receive special notice, without charge, in the Scientific American. A handsomely illustrated weekly. Largest circulation of any scientific journal. Terms, \$3 a year, four months, \$1. Sent by mail, postpaid. Munn & Co., 36 Broadway, New York. Branch Office, 55 E. 7th, Washington, D. C.

A. McNAIR THE HARDWARE MAN

BRIDGE & BEACH Stoves, Ranges and Heaters have in them so many excellencies that they are now acknowledged the greatest sellers on the coast and they are growing in favor every year. We have the exclusive agency in Bandon for these household and office necessities, and prices range exceedingly modest in either case.

TINNING AND PLUMBING A SPECIALTY. Our Assortment of Hardware, Tinware and Edged Tools is Most Complete.

SAM SAYS

These cold damp winds are easily kept out by our No. 1 Rustic and O. G. Battens.

GEO. W. MOORE LUMBER CO.

BANK OF BANDON

BANDON OREGON

Capital Stock \$50,000

BOARD OF DIRECTORS: J. L. Kronenberg, President, J. Denholm, Vice President, F. J. Fahy, Cashier, Frank Flam, T. P. Hanly.

A general banking business transacted and customers given every accommodation consistent with safe and conservative banking.

CORRESPONDENTS: The American National Bank, of San Francisco, Calif; Merchants National Bank, Portland, Oregon; The Chase National Bank, of New York.

THE COQUILLE RIVER LINE

Strs. Fifield & Bandon

Twin Screw, New and Fast

1st Class Passage, - \$10.00 & \$7.50
Up Freight, - - - - - 3.00

Our interests are your interests. Fair rates and good service our motto

A. F. Estabrook Co., 245 Cal. St., San Francisco
L. L. BRANDENBURG, Agent, Bandon, Oregon

Fast and Commodious

S. S. BREAKWATER

Leaves Portland (Ainsworth Dock) 8 p. m. every Tuesday.

Leaves Coos Bay every Saturday at service of the tide.

Confirm Sailings Through C. M. SPENCER, Agent Bandon

S. S. ELIZABETH

NEW STATE-ROOMS INSTALLED

Eight Day Service Between the Coquille River and San Francisco

First Class Passenger Fare, - \$7.50
Freight Rates, - \$3 on Up Freight

J. E. WALSTROM, Agent, Bandon, Oregon.
E. & E. T. Kruse, owners and managers, 24 California St., San Francisco.

If you wash a bottle cold—
Call at the Eagle,
If you love the good that's old—
Call at the Eagle,

'Taint no use to sit and blink
If you really need a drink,
Just make a sign or ring a bell,
And you bet they'll treat you right
Down at the Eagle

Alvin Munck, Prop.
BANDON, OREGON

BANDON Harness Shop

Full line of Harness, Saddles, Bridles, Halters, Blankets and everything usually kept in a first-class harness shop.

Repairing a Specialty
W. J. SABIN, Prop.