

VALUE OF CONCRETE

Roads Constructed of This Material Very Serviceable.

DURABLE FOR HEAVY TRAFFIC

They Can Be Maintained at a Considerably Low Cost—Freedom From Dust and Mud a Good Feature—Experiment in Michigan.

In a paper read before the annual good roads convention, held recently at Cleveland, O., Edward N. Hines, chairman of the board of Wayne county road commissioners, expressed his views regarding concrete roads in the following manner:

Concrete roads would meet the ideal conditions of road building because of comparatively low first cost, durability, low maintenance cost, ease of traction and freedom from dust and mud.

The value of concrete roads was shown in a recent experiment near Detroit, Mich., where a road was made seventeen feet eight inches wide of concrete, with shoulders on each side of the natural soil, making the width twenty-six feet over all at its narrowest point.

The annexed specification was drafted, it being the intention of the board



A WELL BUILT CONCRETE ROAD. [From Good Roads Magazine, New York.]

to do the necessary grading, tilling, ditching, putting in of manholes, building shoulders and, in fact, doing all the work but the actual concreting.

Ninety-eight cents a barrel was paid for cement and 75 cents a yard for sand, and the prices of limestone and crushed cobble are shown in the specification. The average haul was about two miles. Two thicknesses of three ply tar paper were used in the three twenty-five foot sections, the fourth section being made half an inch wide and filled with a composition of four parts soft pitch to one part Trinidad asphalt, to which was added 3 per cent of still wax, the whole heated and poured into the joint in a boiling state. A strip of southern pine was also used as an experimental joint.

The following specifications are those under which such a road can be constructed:

All cement used should be portland cement of American manufacture. No more than 8 per cent of the cement should fail to pass through a No. 100 sieve nor more than 25 per cent should fail to pass through a No. 200 sieve, and it should stand a test of 150 pounds per square inch tensile strain when made into briquets and exposed in air until final set and the balance of twenty-four hours immersed in water. One day in air and six days in water should show a tensile strength of at least 450 pounds. One day in air and twenty-seven days in water should show a tensile strength of at least 500 pounds, and when mixed in proportions by weight of one of cement to three of sand and exposed in air one day and in water six days it should stand a tensile strain of at least 150 pounds and in twenty-eight days a strain of at least 200 pounds per square inch.

Sand used in making concrete should be clean, dry, crushed quartz, trap rock, granite or well graded bank, lake or river sand, passing a No. 20 sieve of No. 28 wire, and be so graded as to contain fine and coarse particles of the same grade of material, the coarse particles to predominate.

Stone for concrete can be purchased at the following prices per ton, which prices represent the actual cost of the stone laid down: Two inch, \$1.50 per ton; chips, \$1.90 per ton; screenings, \$2 per ton.

In case of hard stone, weights should be computed by measurement on the basis of 2,800 pounds per cubic yard for two inch stone, 2,700 pounds per cubic yard for chips and 2,800 pounds per cubic yard for screenings.

Concrete for the first course should consist of one part of cement, two parts of sand and five parts of broken limestone and for the second course one part of cement, two parts of sand and three parts of hard stone, evenly mixed.

In placing the concrete in position in the construction of the pavement the men should place the concrete where directed and so as to keep the different layers of a uniform thickness. Each layer should be well tamped with an approved tamper and as directed by the engineer.

The second course must be laid within twenty minutes after the first course is completed and placed and tamped same as the first course. And at night or at any other time when the work is discontinued all the work of both layers should be completed up to a common expansion joint.

In other words, no section of pavement should be allowed to be left unfinished for a longer period of time than twenty minutes if work thereon has been started.

After the second course of concrete is laid and until it has thoroughly set it should be protected from the sun by a canvas or other suitable covering.

When the concrete is sufficiently hard to warrant, this covering should be removed and the concrete covered with a layer of sand or gravel about one inch in depth and sprinkled and kept damp to prevent the surface of the concrete from drying out too rapidly, which covering should be left on the concrete for a period of seven days.

Expansion joints should be placed in said pavement every twenty-five feet by actual measurement, such joints to be made by placing in position a one-half inch thick strip of wood (southern pine) of the same width as the thickness of the road metal and cut so as to conform to the finished surface of the pavement. This board should be removed after the concrete has become set, but not until twenty-four hours have elapsed after the placing of the concrete on both sides of the board. And when the board is removed the space left by it should be filled with a filler of the following composition: Four parts soft pitch and one part asphalt refined Trinidad, to which mixture must be added 3 per cent of still wax, the whole to be heated and poured into the joints in a boiling state.

ORIGIN OF THE SPLIT LOG.

Novel Manner in Which Farmer Devised Scheme For Dragging Roads. A few years ago a Missouri farmer named King became disgusted, as many a farmer has been before and since that time, with the condition of the highway between his farm and the neighboring village. He studied the situation and one day devised a rude contrivance to smooth the rough places and round up the surface from the ditch to the center so as to drain off the water.

It was a simple affair, made of a log split into two equal parts, a few braces between them, and a chain by which the horses hauled the drag with him upon it. He tried it after a rain when the road was soft, and it worked so well that its fame and the fame of the improved road spread through the neighborhood and thence far and wide.

That was the modest beginning, and now the split log drag, which any farmer or road commissioner can make in a few hours, is revolutionizing the methods of maintaining dirt roads—methods which have always been notoriously expensive and ineffective. The drag was not patented, and its inventor, with nothing to sell and only as a good roads enthusiast, has toured the country telling gatherings of farmers, road commissioners and local officials the marvelous results both in immediate improvement and in the subsequent cheapness of maintenance accomplished in the middle west, where the drag is now in general use. Indeed, in one state, Iowa, its use on all country roads is now required by legislative enactment.

The great value of good roads to the agricultural interests of the country is appreciated everywhere. A comparatively small mileage of the roads can be surfaced with crushed stone or gravel, and in the cheap and effective maintenance of the prevailing dirt roads the device, primitive in appearance, made from a split log and hauled by the energy of an intelligent western farmer, promises to be a most important agent.

PLEA FOR GOOD ROADS.

Pennsylvania Congressman Strongly Urges Betterment of Our Highways.

In a speech made during the celebration of the surrender of Cornwallis Congressman J. Hampton Moore pleaded strongly for the betterment of roads throughout the country. He said: With good roads and improved waterways in the United States the Revolutionary war could not have lasted eight years. General Washington, he said, had insisted that free and easy commercial intercourse between the Atlantic seaboard and "the amazing territory to the westward of us" was "the best if not the only cement" that could bind the colonial states upon a permanent basis.

Washington and his compatriots, he pointed out, counted upon international trade to assist in building up the colonies and to populate and develop the vast country over which the grasp of England had been released.

"Commerce and labor, capital and industry demand that the waterways of the United States, its harbors and approaches be developed now, even as Washington and his compeers hoped for their development," he said.

"It is not that the railroad is failing to give the best it can afford. It is not that marvelous benefits, uniting states and sections, oceans, lakes and gulfs, have not ensued since the iron horse began its civilization of the wilderness. It is simply that the population of the country has grown more rapidly in proportion than has the ability of the railroad to comply with the requirements of modern transportation."

ROCKEFELLER TO MEND ROAD

He Will Put Down a Mile of Model Pavement Near Tarrytown, N. Y.

William Rockefeller, it was announced recently, will spend \$50,000 to repair Broadway from the North Tarrytown (N. Y.) village line to the south line of Briarcliff. The road in front of Mr. Rockefeller's estate has been in bad condition all summer. Mr. Rockefeller rides back and forth to his office in New York every day in his automobile and has been greatly inconvenienced by the condition of the road.

The road to be repaired is more than a mile long. It is proposed to build a roadway thirty-three feet wide between gutters, and the central part to a width of twenty feet will be bricked with pavement blocks. On each half a special block will be used. Mr. Rockefeller thinks this road will afford a model that will be followed by town authorities who are looking for a road to stand up under the automobile traffic. Mr. Rockefeller was the first person in the county to apply oil to roads, and he is the first to try this kind of automobile road there.

Johnnie was asked to give a definition of oxygen, and he said it was "a little boy cow."

When the snow lies hard and smooth 'Tis coasting time, you know. Happy boys and girls with sleds To the hillside gaily go.

Up they walk, and down they ride. Oh, 'tis such exciting joy! And the grownup who looks on Longs to be a girl or boy.

Cheeks are red, and eyes are bright. Laughter rings across the land. As the sleds go gliding down With the merry coasting band.

There is every reason for naming roads. The convenience to travelers, the definiteness of location when directing persons, the pride in having country homes designated as city homes are with respect to locality and the general good sense of the movement, should appeal to every one.

The Garden City Telegram is advocating a fine project in urging that the country roads in Kansas should be given appropriate and distinctive names. This road naming suggestion came, the Telegram believes, originally from these columns, though it is by no means new outside of Kansas. The east, foreign countries, California and other regions have all gone into this excellent course of action in the past.

Young Folks

QUEER FREAK OF NATURE.

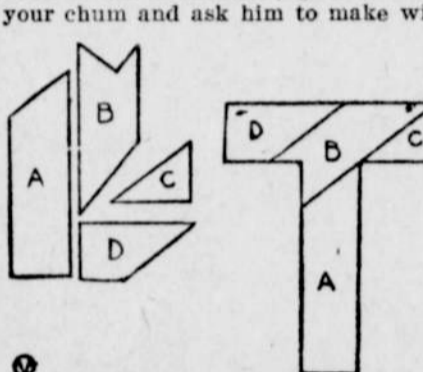
A Siberian Lake That is Covered With a Roof of Salt.

There is in Siberia one of the strangest freaks of nature yet discovered. Near a place called Obdorsk is a salt lake nine miles wide and seventeen miles long, almost a little sea. And yet except in a few scattered places this great body of water is covered with a roof of salt, which is about three feet above the surface. The traveler who found it says that it was in summer time that he visited it, and when approached it looks like a vast plain of snow surrounded by fields of ripening grain. This contrast makes the sight all the more interesting.

An old man who remembers when the first salt crystals formed on the surface of the water acted as a guide to the traveler. Every year the evaporation of the water left more crystals, and after awhile they became a sort of crust covering nearly the whole surface. Several years ago the water found an outlet into the river Obi, and that lowered the lake's surface about three feet, leaving that space between the water and the salt roof.

The guide took the traveler down through a hole in the roof into a low flat boat that was resting in the water underneath. They both lay down on their backs in the boat and moved it here and there on the water, using the irregularities of the roof as a means of pushing the boat along. The effect as the sun shone down through the crystals was magically beautiful, its rays being refracted into all the hues of the rainbow.

A Clever Puzzle. Cut out the queerly shaped pieces seen in the illustration, give them to your chum and ask him to make with them a letter of the alphabet. You of course see that by arranging these sections properly they form the letter T.



Good Guessing Game. This game has a bearing on geography. One player selects in his own mind some well known city, say Boston, for example, and begins, "I know a place where they sell boots" (or anything else beginning with "b").

The next player then knows what letter the place begins with and starts thinking what town it may be. Perhaps he decides that it is Birmingham, in which case he would indicate that he thought the second letter was "i" by saying, "I know a place where they sell ice" (or iron or ink). "No," says the first player, and the third must then try. She may think it is Brighton and may say, "I know a place where they sell rockets" (or raisins). "No," says the first player again, and the trial goes around the circle.

If the right letter is not guessed before it comes around to the starter he gives them a little light on the word by saying, "I know a place where they sell oranges" (or oil or oats), and so on until the word is spelled through.

Strange Stowaways. Among the many strange passengers that come from foreign ports without paying fare a flock of butterflies is the most curious. In one of the tropical ports a cloud of butterflies hovered around the rigging of the ship, following it out of sight of land and alighting on its deck and masts. Many were destroyed by storms, but some hid away, and after a thirty days' voyage to England they came out of their hiding places and flew ashore, introducing a new species of butterfly to that country.

Cockroaches, ants, tarantulas, small serpents and all kinds of insects get on shipboard in tropical fruits and in other ways. Sometimes the sailors miss provisions and other articles, and then they know that there must be monkeys hidden on shipboard. The monkeys may resist capture when first found, but they soon become very chummy with the sailors. But they pay for their free ride by being man's slave ever after.

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The Deadly Paralell

He Advertises He Doesn't

Follow the Glad Face Advice and You Won't Look Glum.

State-wide interest is shown in the development congress to be held at Eugene February 11 and 12. Commonwealth Day, the fifty first anniversary of the admission of Oregon as a state will be celebrated on February 12. Questions of general interest, such as the conservation of the state's resources, extension of irrigation, country conditions, and educational subjects will be taken up.

STOMACH TROUBLE CURED

If you have any trouble with your stomach you should take Chamberlain's Stomach and Liver Tablets. Mr. J. P. Klote of Edina, Mo., says: "I have used a great many different medicines for stomach trouble, but find Chamberlain's Stomach and Liver Tablets more beneficial than any other remedy I ever used." For sale by C. Y. Lowe.

Mr. Dunham, the oil expert who spent sometime on the Bay in the all, has returned from California, where he spent the holidays and will continue his investigation of alleged oil deposits in this section. He expects other Californians here soon and if they are satisfied with the prospect, a test hole will be sunk soon—Times.

Notice of Dissolution

The partnership heretofore existing under the name of Pickett & Hollenbeck on the first day of Jan. A. D. 1910 dissolved by mutual consent, Ada Nettie Hollenbeck to assume all debts and receive all accounts.

Ada Nettie Hollenbeck

E. J. Pickett.

Presbyterian Church

Sunday school every Sunday at 10 a. m.; Christian Endeavor in the evening. Preaching every Sunday except the fourth Sunday of the month. Visitors welcome.

M. E. COEN, Minister.

ButterWrappers for sale at this office.

Coquille River Transportation Co.'s Schedule

	Leaves	Arrives
Bandon		Coquille
Coquille,	6:00 a m	8:30 a m
Dispatch,	1:00 p m	3:00 p m
Favorite,	7:00 a m	10:00 a m
	1:30 p m	4:00 p m
	Leaves	Arrives
Favorite,	7:30 a m	10:30 a m
Coquille,	3:06 a m	11:30 a m
Dispatch,	4:00 p m	5:30 p m
	1:00 p m	5:00 p m

The Coquille connects with the trais at Coquille for Marshfield and Myrtle Point.

The up-river passengers can come to Bandon on the Favorite and have three hours here in which to do their rading and other business.

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THE RECORDER management has made arrangements with the San Francisco Bulletin whereby we can give subscribers the advantage of a gigantic combination offer that will furnish them all the news of the country in a metropolitan daily and all the news of Bandon and vicinity in the Recorder at a marvelous low price

The Daily San Francisco Bulletin,	\$3.00 per year
The Bandon Recorder,	1.50 per year
Total,	\$4.50

Both papers through this office if paid in advance, per year **\$2.75**

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First-class Passenger Fare, \$7.50

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