

THE VALUE OF GOOD ROADS

BENEFITS THAT WOULD ACCRUE TO FARMERS.

The Best Road for This Country, and Hints on How to Build It.

Bad roads constitute the greatest drawback to rural life, and for the lack of good roads the farmers suffer more than any other class. Some of the benefits that would accrue to farmers through the construction of good roads are:

Good roads, like good streets, make habitation along them most desirable; they economize time and force in transportation of products, reduce wear and tear on horses, harness and vehicles, and enhance the market value of real estate. They raise the value of farm lands and farm products and tend to beautify the country through which they pass; they facilitate rural mail delivery, and are a potent aid to education, religion and sociability. Charles Sumner once said, "The road and the schoolmaster are the two most important agents in advancing civilization."

CHARACTERISTICS OF GOOD ROADS.

The aim in making a good road is to establish the easiest, shortest, and most economical line of travel. It is therefore desirable that roads should be hard, smooth, comparatively level, or laid out on the ground so that their grades may be such that loaded vehicles may be drawn over them without great loss of energy; that they should be properly constructed, the ground well drained, the roadbed graded, shaped and rolled, and they should be surfaced with the best materials procurable; that they should be properly maintained or kept constantly

IN GOOD REPAIR.

The road that will best suit the needs of the farmer in the first place must not be too costly; and, in the second place, must be of the very best kind, for farmers should be able to do their heavy hauling over them when their fields are too wet to work, and their teams would otherwise be idle.

The best road for the farmer, all things being considered, is a solid, well built stone road, so narrow as to be only a single track, but having a firm earth road on one or both sides. Where the traffic is not very extensive the purposes of good roads are better served by narrow tracks than by wide ones, while many of the objectionable features of wide tracks are removed, the initial cost of construction is cut down one-half or more, and the charges for repair reduced in proportion. Where beds of good gravel are available this is the simplest, cheapest and most effective method of improving country roads. With earth alone, however, a very passable road can be made, provided the principles of location, drainage and shape of surface, together with that of keeping the surface as smooth and firm as possible by rolling, be strictly adhered to. In fact a good earth road is second to none for summer travel, and superior to many of the so-called macadam or stone roads. But the earth roads must be covered with some artificial material, if they are to be made firm and unyielding at all seasons and in all kinds of weather, with a surface smooth and impervious to water.

GOOD ROADS TRAIN.

The Department of Public Road Inquiries and the National Good Roads Association of the United States combined their forces a couple of years ago for the purpose of furnishing object lessons on the construction and value of good roads to farmers in a large number of countries. A good roads train was equipped and run between Chicago and New Orleans, building short sample stretches of model road, and holding local conventions in various counties along the route. By this means splendid educational work was done in the direction of impressing upon the people the desirability of better roads, and the facility with which they

CAN BE CONSTRUCTED.

Realizing the great good that would be accomplished if a similarly equipped train were operated in Canada, an effort was made early in 1901 to arrange for work of this sort in the Ottawa district. Chiefly through the exertions of Mr. H. B. Cowan, of Ottawa, secretary of the Good Roads Association of Eastern Ontario, the Sawyer-Massey Company, of Hamilton, Ont., manufacturers of road-making machinery, were induced to supply free of charge all the necessary machinery for such an enterprise, and also three or four experts to take charge of and operate the machinery. The Canadian Portland Cement Company of Deseronto, Ont., aided the enterprise by donating some 150 to 200 barrels of cement for the construction of concrete culverts which are much more satisfactory than wooden ones for drainage purposes. Further assistance was given to the movement by the Canadian Pacific, Grand Trunk, Canada Atlantic, and Ottawa & New York Railway companies which all agreed to transport the necessary machinery and experts over their lines without charge.

SAMPLE STRETCHES OF ROADS

It is desirable that all heavy traffic roads should be macadamized or gravelled, wherever the materials are available for the purpose. In order to give an object lesson on

"Prizes" with common soaps are dearly paid for at the expense of clothes and hands.

SUNLIGHT SOAP REDUCES EXPENSE

Ask for the Octagon Box.

the value of such roads, and the proper manner to build them, the good roads train was employed to build a model stretch of stone road from a third to half a mile in extent, in each of ten counties, and to roll and grade an additional stretch. The selection of the various stretches of road was left with the County Councils, with the understanding that the Township Councils should furnish all the necessary stone, teams, laborers, etc. Owing to the heavy expense incurred, each County Council was asked to make a grant of \$100 for each stretch of road built.

In building these sample roads, the first thing is to provide the requisite drainage, which is the fundamental principle of road making. The roadbed is then shaped with the grader, making the center considerably higher than the sides so that the water will readily run off INTO THE DITCHES.

After rolling with the big steam roller, a trench about eight feet wide and six inches deep is cut down the centre of the road. Into this trench is put first a layer of coarse broken stone, then a layer of fine stone, lastly a layer of still finer stone as a dressing. This last layer helps to bind all the stones into a solid mass, while the sides of the trench hold it all in place. The ten-ton steam roller is run over each layer of stones as it is put on. The rolling is always done down the sides of the trench first so that the stones will be crowded toward the center. When the rolling of the sample stretch is completed, the stone should be about seven inches deep, which is sufficient to stand ordinary traffic. Such a road may have to a slight extent in some localities, but the expense of keeping it in repair will be much less than for an ordinary clay road.

COST OF SUCH ROADS.

Roads such as those that have been built by the good roads train cost anywhere from \$500 to \$1,000 per mile, according to management and cost of stone. The average stone road costs from \$600 to \$750 per mile. Such roads need a certain amount of repairing, the same as other roads, but not much. The number of cords of stone required for a mile of road depends altogether upon the depth of stone laid down. If laid on eight feet wide and eight inches deep in the center, it would take about 220 to 240 cords per mile.

OUTFIT OF MACHINERY.

A traction engine for hauling the grader and working the crusher, a crusher, elevator bins, spreading waggons, and a five or six ton horse roller would cost altogether about \$2,800, and this outfit would be sufficient to do all the work for any ordinary municipality.

F. W. HODSON.

Everyone has heard of St. Jacobs Oil for rheumatism, strains, bruises, lame back, and all muscular aches and pains, but few know that there is nothing to equal it for relieving aching feet, troublesome corns, and for softening the harsh, callous skin which frequently forms on the soles of the feet. Anyone suffering from sensitive spots on the toes, sides of the feet, or between the toes, should rub a little St. Jacobs Oil on the sore spot every night. The immediate relief obtained is simply wonderful.

No household should be without St. Jacobs Oil. It will be wanted after cricket, after tennis, after a day's boating; in fact, it is the athlete's friend. All chemists sell St. Jacobs Oil and a 50 cent bottle is sufficient to prove beyond a doubt the above statements.

DOVES ARE NOT GENTLE.

Owls Are at Home in the Light of Day.

Owls are no wiser, for all their meditative appearance, than any other birds—in fact, they are far below many in the scale of intelligence. Another false idea which many people entertain concerning these birds is that they are so confused by sunlight as to be practically blind during the day. Great horned owls and barn owls are the most nocturnal of all; but even these can see very distinctly by squinting up their eyelids, while the snowy owls and the burrowing owls are perfectly at home in the light of the brightest day, and many owls are to be seen flying and hunting in the sunshine as unconcerned as any hawk.

Eight persons out of ten will tell you how much better a crow or magpie can talk if its tongue is split; but you can tell them that this idea is absolutely false, as these birds can articulate more distinctly with a perfect tongue. And how much suffering does this useless operation cause, the tongue of a bird being so constantly used? Doves have a world-wide reputation

for meekness and gentleness, but, if we except their sad, soft notes, and subdued colors, there is little to admire about them, for their disposition, in love and war, is anything but a gentle one. The male birds peck and strike one another with their wings until generally one succumbs and is killed. If the females are timid or backward in accepting their mate's attentions, bows and coos are changed to buffets and spiteful pecks.

Mr. Housekeep—"For goodness sake! What are you crying about?" Mrs. Housekeep—"Bridget got mad and left this afternoon (sob) without a moment's (sob) notice."—Mr. Housekeep—"Well, you were going to discharge her anyway." Mrs. Housekeep—"I know (sob). That's the trouble. She (sob) got ahead of me."

AN AWFUL MISTAKE.

PHYSICIAN PRESCRIBES NUX VOMICA FOR A KINGSTON LADY WITH THE RESULT THAT SHE IS PARALYZED.

A Thrilling Experience Resulting From a Doctor's Blunder—Fortunately She Recovered and Tells the Story of the Whole Incident.

Kingston, Ont. Oct. 13.—(Special) That Mrs. E. Lake, of 112 Clarence street, this city, is alive to-day, is a matter for wonder. She says:

"My sickness was brought about by overdose of Strychnine prescribed by a physician. It brought on Paralysis affecting my left side, brain, arm, and limbs.

"I was perfectly helpless and it was impossible for me to raise my left limb or open my fingers. I got no sleep and often when I dosed my eyes remained open. I had not the power to close my eyelids.

"I suffered almost continually with headache.

"My brain felt as though it was too large for the skull. My appetite failed and I became very emaciated, indeed. I was nothing but skin and bones.

"I was three years under treatment, many physicians having me under their care, but without avail. At last I became discouraged and gave up all treatment.

"While reading a paper one day I noticed a testimony of one who was cured by Dodd's Kidney Pills.

"My sister procured me a box of the pills and I started on three pills three times a day. I soon began to experience a change for the better which continued until I regained the use of my arm, hand and limb. My headache also ceased and my appetite returned.

"From this I soon picked up flesh and strength until I was as well as ever.

"I thank God and Dodd's Kidney Pills for my health, for by prayer and this wonderful remedy, I was cured and have remained in good health ever since, although this was over five years ago."

"Will you trust me, Fanny?" he cried, passionately, grasping her hand. "With all my heart, Augustus, with all my soul, with all myself," she whispered, nestling on his manly bosom. "Would that you were my tailor," he murmured to himself, and tenderly he took her in his arms.

Messrs. C. C. Richards & Co. Gentlemen,—My daughter 13 years old, was thrown from a sleigh and injured her elbow so badly it remained stiff and very painful for three years. Four bottles of MINARD'S LINIMENT completely cured her and she has not been troubled for two years.

Yours truly,

J. B. LEVESQUE.
St. Joseph, P.Q., Aug. 18, 1900.

Little Bobby was inspecting the new baby for the first time, and his dictum was as follows: "I s'pose it's nice enough, what there is of it—but I'm sorry it ain't a parrot."

Minard's Liniment Cures Dandruff.

Out of 100,000 children born this year, there will be but three alive in 1997.

THE MANY ADVANTAGES

offered passengers bound for Buffalo and New York by the Grand Trunk's fast "New York Express," leaving Toronto 6.15 p.m. daily, are seen at a glance when the splendid equipment is considered. A full dining car service until Niagara Falls is reached, a cafe parlor car running through to Buffalo, and one of Pullman's finest sleeping cars from Toronto to New York guarantees patrons comfort and luxury as well as speed. The cafe and dining cars are acknowledged to be the handsomest in America, being electric lighted and equipped with electric fans. City office, northwest corner King and Yonge streets.

Mosquito eggs hatch in from four to seven days, according to the temperature.

You may pay a higher price, but don't flatter yourself that you can buy better tea than Blue Ribbon Ceylon. Ask your friends about it.

Put up Black Mixed & Ceylon Green

APPLES and POULTRY

We can handle any quantity of properly packed Apple Also any quantity of Poultry (dead or alive.) Write us. THE DAWSON COMMISSION CO., Limited, TORONTO.

MIGHT BE SHE BUMPS.

"That man is a phrenologist, Pat."

"A what?" asked Pat, puzzled.

"A phrenologist."

"An' sure, what's that, sorr?"

"Why, a man that can tell, by feeling the bumps on your head, what kind of a man you are."

"Bumps on my head, is it?" exclaimed Pat. "Begorra, then, I think it would give him more of an idea what kind of a woman me wife is!"

Minard's Liniment relieves Neuralgia.

3 1/2 per 100 of London police are daily on the sick list.

Beware of Ointments for Catarrh that contain Mercury

as mercury will surely destroy the sense of smell and completely derange the whole system when entering it through the mucous surfaces. Such articles should never be used except on prescriptions from reputable physicians, as the damage they will do is ten fold to the good you can possibly derive from them. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toronto, acting directly upon the blood and mucous surfaces of the system. In buying Hall's Catarrh Cure be sure you get the genuine. It is the best remedy for Catarrh, and is taken internally, acting directly upon the blood and mucous surfaces of the system. In buying Hall's Catarrh Cure be sure you get the genuine. It is the best remedy for Catarrh, and is taken internally, acting directly upon the blood and mucous surfaces of the system. In buying Hall's Catarrh Cure be sure you get the genuine. It is the best remedy for Catarrh, and is taken internally, acting directly upon the blood and mucous surfaces of the system.

Sold by Druggists, price 75c per bottle. Hall's Family Pills are the best.

He (bitterly)—"You have no heart." She—"What nonsense!" He—"It's the truth. You flirt outrageously with every man you meet." She—"Then I must have a very large heart to give a little of it to so many."

FOR OVER SIXTY YEARS.

AN OLD AND WELL-TRIED REMEDY.—Mrs. Winslow's Soothing Syrup has been used for over sixty years by millions of mothers for their children who teething, with perfect success. It soothes the child, softens the gums, allays all pain, cures wind colic, and is the best remedy for Diarrhoea. It is pleasant to the taste. Sold by druggists in every part of the world. Twenty-five cents a bottle. Its value is incalculable. Be sure and ask for Mrs. Winslow's Soothing Syrup, and take no other kind.

Civet, ambergris, and musk are all disgusting to the sense of smell in their raw state.

IN GOING TO NEW YORK

Take the Lehigh Valley Railroad route of the Black Diamond Express. Everything strictly first class. Sumptuous Dining Car Service, a la carte. Through Pullman. For tickets, Pullmans, time of trains, and further particulars, call at Grand Trunk ticket office or on Robt. S. Lewis, Passenger Agent, 33 Yonge street, Board of Trade building, Toronto.

According to the latest estimate, there are in the world 74,600,000 horses, and 12,100,000 asses.

TO CURE A COLD IN ONE DAY.

Take Laxative Bromo Quinine Tablets. All druggists refund the money if it fails to cure. E. W. G. Owen signature is on each box. 25c.

"A full mail" carried by a big Atlantic liner averages 200,000 letters, and 300 sacks of newspapers.

In washing woollens and flannels, Lever's Dry Soap (a powder) will be found very satisfactory.

If the earth were equally divided among its present inhabitants each of us, man, woman and child, would get 2 3/4 acres.

ENGLISH SPAVIN LINIMENT

removes all hard, soft or calloused Lumps and Blisters from horses. Blood Spavin, Curbs, Splints, Ring Bone, Sweeny, Stiffes, Sprains, Sore and Swollen Throat, Coughs, etc. Save \$50 by use of one bottle. Warranted the most wonderful Blemish Cure ever known. Sold by all druggists.

The oldest steam engine at work is supposed to be the Newcomen winding engine at Farme Colliery, Rotherglen, near Glasgow. It was built in 1809.

WABASH RAILROAD

During the months of September and October, will sell one way second class tourist tickets at greatly reduced rates to California, Washington, Oregon, Utah, Montana, British Columbia and other Pacific Coast points. Tickets will be sold via all direct routes. The Wabash is the shortest, best and quickest route from Canada to the above points. Finest equipped passenger trains in America.

Rates, time-tables and all particulars from any ticket agent, or J. A. Richardson, Dist. Passenger Agent, N. E. Corner King & Yonge Sts., Toronto, and St. Thomas, Ont.

The limit of this earth's capacity is 5,294,000,000 human beings. The world could feed no more. At the present rate of increase this limit would be reached by A. D. 2100.

Minard's Liniment for sale everywhere

Book Canvasser—"Don't you want to buy an encyclopaedia to-day?" "No! What do I want with a thing? I'd break my neck the first time I rode it."

Minard's Liniment Cures Burns etc.

Artist—"I suppose you have no objection to my sketching in your field?" Farmer—"Oh, no; you'll keep the birds off the cabbages better'n a ordinary scarecrow."

Stops the Cough and works the Cold Laxative Bromo-Quinine Tablets cure a cold in one day. No Cure, No Pay. Price 25 cents.

"A woman, I notice, always lowers her voice to ask a favor." "Yes, and raises her voice if she doesn't get it."

THE MOST POPULAR DENTIFRICE.

CALVERT'S CARBOLIC TOOTH POWDER.

Preserves the teeth. Sweetens the breath. Strengthens the gums.

GOOD MONEY

Earned knitting for us. We rent new knitting machines. Other inducements to right parties. Send for particulars at once. Ontario Furnishing Co., Toronto, Ont.

HAVE A GOOD LIGHT

Standard American Wicks

Sarnia Lamp Oil.

Wholesale Only.

QUEEN CITY OIL CO.

SAMUEL ROGERS-PARIS, TORONTO.

To send for our Complete Sheet Music Catalogues and Special Rates.

We are equipped to supply every Music Teacher in Canada.

WHALEY, ROYCE & CO., Limited

356 Main Street. 158 Yonge Street. WINNIPEG, MAN. TORONTO, ONT.

Dominion Line Steamships

Montreal to Liverpool. Boston to Liverpool. Portland to Liverpool. Via Queenstown.

Large and Fast Steamships. Superior accommodations for all classes of passengers. Saloons and Staterooms are amply supplied. Special attention has been given to the Second, Third and Third-Class accommodations. For rates of passage and all particulars, apply to any agent of the Company, or

Richardson, Mills & Co. D. Torrance & Co. 77 State St. Boston. Montreal and Portland.

WOOD & PHOTO ENGRAVING

J. L. JONES ENG. CO.

168-BAY STREET-TORONTO

The Advantages

of our Savings Department are not confined to residents of Toronto. We have every facility for taking charge of either large or small accounts of persons anywhere in the Dominion.

Write For All Information.

THE Canada Permanent

AND WESTERN CANADA

MORTGAGE CORPORATION,

Toronto Street, Toronto