

## ROAD IMPROVEMENT.

BILL NYE ON ROADS.

He Points a Moral and Adorns a Tale in The Tar Heel Trail.

The prize medal was cheerfully awarded to the writer last year, at Chicago, by a competent committee, for the most picturesque display of roads. I do not say this boastfully, but because it may encourage others to make a similar collection.

Western North Carolina is very mountainous and therefore a beautiful country, the soil in most instances being a cheerful red, similar to the shade adopted for second-hand cook stoves. These vermilion roads wrap themselves around the mountains of Buncombe



Bill Nye usually hires a hall, but this is one of the halls he can't hire.

County in graceful sweeps, or pour Venetian red cascades over the ridges and hog-backs of Catawba County.

Many of these roads hilly and run over the farms, or slip down into the fields during a shower, and remain there to be called for. I have two stray roads still on my estate that lodged there after a long wet spell in April.

The methods of building and repairing roads here are not adopted elsewhere, except along the shores of Lake Victoria Nyanza in South Africa. When the roads are too wet, large irregular stones, ranging from the size of Daniel Webster's head to that of the pee wee egg, are placed in this mud where they disappear, yet may be noticed plainly by riding over them.

Each year, in the country region, the adults are called together by the road master for the purpose of sampling each other's tobacco and making mud pies along the highway. The bed of the road is sunken several feet below the level of the sea, and then plowed up and made mellow like an onion bed. Where it is desired to deflect a stream of rain across the bed on a side-hill, instead of putting in a culvert, the tar heel scientist constructs a soft, wet ridge diagonally across the road, which resembles the new-made grave of a pathmaster, but unfortunately it is not.

The loss on rolling stock here is easily 33-1-3 per cent., for I have kept an accurate account of it for three years, during



This shows Mr. Nye in the act of putting up samples of roads in milk cans to be sent to his road exhibit in Chicago.

ing which time my wagons have been renewed. Landaus and Victorias are not used much here, but a hickory crotch is attached to an axle-tree of some hard and tenacious wood; a pair of cast iron wheels from the wreck of a four-wheel wagon completes the trap, unless one should be high-spirited and want a box, in which case, a common quack trap is nailed on the axle. I enclose herewith a photograph of a machine suited to these roads. It was taken two years ago and shows the wagon looking west.

Naturally the resident here is content with things as he finds them—or as they find him. If a wood tick or a Buncombe County flea should attack a man who was born here, the man heaves a sigh, scratches the place, and says to the insect without passion, "Well there! I hope now you're satisfied."

It is the same with the roads. If a chuck hole gets formed in the road and squirts a yellow stream into his whiskers, he waits till his whiskers dry and then he is ready for another dose. He also raises whiskers of a color which matches the clay, and so it is not noticed.

The corduroy road was also originated in this country. After several generations of corduroy, it is found that most of the people here are entirely destitute of kidneys, these features having been shaken loose and lost after many years of riding on corduroy roads.

But the material for making roads here is good. In fact, that is about all that it is good for. The stone is not good for building, and the soil is not

capable of even raising a disturbance. Last year I put \$108.85 into seeds and \$150 into a gardener. I also hired the ground plowed and hired a night watchman to put ear muffs on the ears of my sweet corn when the July frosts struck the mountains, and yet my flagolet string beans cost me \$1 per dozen and the accused garden prevented my son's graduation at the John Hopkins Place.

The roads are in a sad plight after a long rain and look like a neglected candy pull. I feel very sadly this condition of affairs, for where the climate is so healthful that people under 115 years of age attract no attention it seems a sin to take our pullets to market aboard a roan heifer. We have a glorious climate here the year round, and people come here from the four corners of the earth to get rid of their tubercles; but the roads are so rough that one has to hold in his broader principles with one hand and his appendicitis with the other for miles at a time. If Congress—but that's out of the question when Congress has been in perpetual session for a year, and has developed nothing but paresis. We must go to the polls this year and the next, and the next, with Good Roads at the top of our ticket, and live or die, elect only those men who promise us upon their sacred honor that this platform and this battle cry alone shall win.

I'm not much of a politician, but we had better stop sending bibles to other nations until we have something to show for roads aside from a long cow trail of dead horses, bleached bones and turkey buzzards outlining a loud smelling quagmire that a barbarian and a cannibal would scorn to use as a war path.—Bill Nye, in Good Roads.

### PATHMASTERS.

How Prof. Shaler, of Harvard University, Would Do It.

The Atlantic Monthly contains an excellent article on the subject of country roads, by Prof. N. H. Shaler, of Harvard University. The Professor says:

This field of activity is not one which can be advantageously cultivated by ignorant men whatever be their natural capacities, or the measure of the experience which they may have derived from a wise use of their blunders. This art demands a wide and well-founded training. It must rest, indeed, upon a good knowledge of several natural sciences. No amount of general determination to improve our conditions in this economic field will be fruitful unless we provide our communities with men who are well trained for the work which is to be done. Unless provision is at once made to educate roadmasters, the present access of interest in this art will lead inevitably to a vast array of costly mistakes which will be likely to discourage our people, and to lead them to the conviction that their new estate is worse than the old. At present there are probably not fifty engineers in the United States who have been properly trained for the work of constructing highways. There may be several times this number who are more or less satisfactorily expert in constructing city streets; but that particular task, though difficult enough, is, as compared with that which the rural highway engineer has to take up, of a relatively simple nature. Few, if any, of our engineering schools pay any particular attention to this science and art. The question of common ways is treated incidentally, and with no emphasis at all commensurate with its importance. There is practically no effort made to develop specialists in this profession.

The first step towards our new dispensation is to persuade our greater schools to undertake the systematic education of road masters, giving to the task the same care which they devote to the preparation of young men for railway or hydraulic engineering.

The next question for the reformer in the matter of road-building concerns the method by which the work of construction, improvement and repair can be insured against the evils of ignorance.

### St. Thomas' Way.

In building macadamized roads in St. Thomas, the stone is supplied from the quarries in three grades of coarseness; 1, screenings, consisting of the stone dust, and small particles of stone not over five-eighths of an inch in diameter; 2, egg, consisting of what passes over the five-eighths inch screen and will pass through a one and one-half inch ring; 3, ballings, or what is too large for the one and one-half inch screen, averaging from two and one-half to three inches in size. A first coating of the largest size as above mentioned, six inches thick in the middle of the road and four inches at the sides, is laid on a prepared sub-grade and rolled until it is well consolidated. If possible, it is well watered or advantage is taken of wet weather to facilitate the binding of the materials. This is coated over with stone of the second size to a depth of three inches and the road is again thoroughly rolled. On this is placed a layer of screenings sufficient to fill the surface interstices between the stones and to cover them about an inch. This last coat, like the preceding one, is watered and well rolled. In place of screenings, fine gravel or very coarse and perfectly clean river sand may be used, but on no account is fine or dirty pit sand permissible. Coarse pit sand may be allowed after having been thoroughly washed so as to remove all earthy matter and the finer particles of sand, which would work down between the stones, prevent them from binding, and convert the macadam in a short time into a loose mass of rounded stone. The great object is to cause the stone to consolidate under traffic into a firm, compact and smooth roadway through the stones being wedged together among themselves. If any loose, earthy or other fine material be mixed with the stones they cannot become so consolidated.—Municipal

### A SIMCOE COUNTY MIRACLE.

The Startling Experience of Mrs. Robinson, of Midhurst.

Eleven Years Sick—Her Case Pronounced Positively Incurable—She Was Given Up to Die by Two Doctors—Now a Picture of Good Health and Strength.

(From the Barrie Examiner.)  
Near the village of Midhurst, about six miles from Barrie, stands the smit of Mr. John Robinson, while within sound of the anvil is his home, where in the midst of a large and leafy orchard dwell the smith and his family. Mr. Robinson is a type of the proverbial blacksmith with "the muscles of his brawny arms as strong as iron bands," but with Mrs. Robinson it has been different. The wife and mother has for a long time been a victim to acute and painful dropsy of the kidneys. Shortly after the birth of her youngest child (now about 13 years) Mrs. Robinson began to take fainting spells, accompanied by violent headaches. This continued through the years that have elapsed, during which time she has obtained the best medical advice available. For about a year she was in constant terror of going insane. Her dull, heavy headache, beating pain in the back and weak swollen legs and body made her case something fearful. To a representative of the Examiner Mrs. Robinson said: "It is some five or six years since I took leave, and since then we have spent hundreds of dollars in medicine and for medical advice. The symptoms of my case were heavy headaches, pain in the back and kidneys and swollen legs. I rapidly grew worse, and last July was given up by two doctors to die, and all my friends and neighbors tell me that they never expected to see me out again. I could not raise myself up, could not dress myself, and had to be assisted in everything. Now I am well and strong, and can put out a big washing without any over exertion. I have also suffered from diarrhea for a number of years, and when

I spoke of it to my doctor he said if it were stopped, worse results would follow. At the urgent request of my son, who was then living in Manitoba, and personally knew of wonderful cures wrought by Dr. Williams' Pink Pills, he decided to give this remedy a trial. Since using the Pink Pills I have been completely cured and have felt none but beneficial effects. Only the week before I commenced taking the Pink Pills I was told by a physician that he could not cure me, and that I would likely get worse when spring came. He analyzed my blood and said it was in a fearful state and that my disease was dropsy of the kidneys, which positively could not be cured. This was about the middle of last January. After the third box of Pills my backache left me and it has not since returned. I have taken thirteen or fourteen boxes in all and owe my recovery to this wonderful medicine. I can't praise Pink Pills too much, whatever I say of them," said Mrs. Robinson.

"I recommend them to everybody. I can't speak too highly of them. They saved my life and I feel it my duty to let others who are suffering as I was know all about them."  
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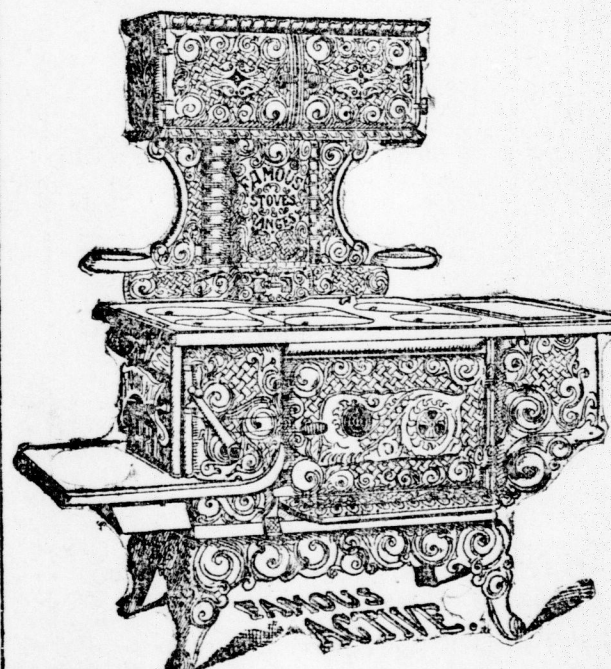
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