

# ROADS AND ROADMAKING

A ROAD OF LITTLE COST.

Maine Has Least Expensive and Most Substantial of Telford Highways.

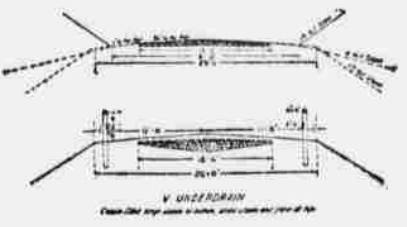
One of the least expensive and most substantial of telford roads in this country is said to be the St. George highway, in Knox county, Maine. It is 18 feet in width, thoroughly drained and cost only 50 cents per foot, or \$2,640 per lineal mile. This low cost was possible because stones of suitable size for the lower courses were beside the road, and granite chips were had for the mere hauling from the grottoes of quarries close by the road.

A description of this road says that its gutters carry away every drop of water. The lower course of the bed is of stones of varying sizes, none so big that a man could not alone handle each, and they were so placed as to tend to bind themselves together, although they were fitted together rather roughly. Smaller pieces were then fitted into the crevices of this lower layer. With long handled hammers men went over this and broke up any bits which were too large.

On these were spread granite chips from the refuse heaps of the adjoining quarry. This top dressing was compacted with a roller drawn by horses, and an excellent road was the result.

## Piping Gutter Water.

In many localities it is the custom to extend to the center of the road driveways leading from adjacent lands to the road to meet its center grade. This practice makes it necessary to carry the gutter water under the driveway in a pipe. Nearly always it is possible, by grading such a driveway, to make it coincide with the gutter grade, so that the surface water will flow by without interruption. This should always be done when possible. Pipes with open ends laid



Typical Cross Section of Macadam Roads.

at the gutter grade are always unsatisfactory, since they fill up quickly with leaves and sand and with slush in winter time, and thus the surface water is forced out upon the macadam and soon gullies it. When a pipe is required, a catch basin should be built on the upper side of the driveway, the pipe should be laid to connect with it, and carried sufficiently far underground to discharge properly into the gutter below the driveway.

## Stirring the Country.

The whole country is stirred as never before relative to this great question of highway improvement. Two years ago six out of the whole galaxy responded to a call of the roll of States that gave aid to their people in road making. Not many ticks of the clock have been heard, nor has the sun risen on many days since the representatives of sixty-five per cent. of the population of the country—men who spoke the minds of fifty-five millions of the people of this land—stood on a platform in Pittsburgh and voiced the demands for better roads; and twenty-two commonwealths were at that time committed to the use of State moneys to help improve the highways of the people. New York had agreed to spend for that purpose \$5,000,000 yearly, or 69 cents per capita of her population, and now Connecticut proposes to give from her State treasury for like purpose practically 100 cents yearly per capita of her people.

## Maximum Grade.

In American practice the maximum grade for important roads has been generally fixed at 5 per cent, where such a grade can be had without too great cost for grading and for payment for damage to abutting property. By 5 per cent, is meant a vertical rise of 5 feet in 100 feet of horizontal distance. A horse can trot without especial difficulty up such a grade. On steeper grades, macadam surfaces, or, indeed, any kind of a surface, can be maintained only at considerable cost.

## No Level Macadam.

Some authorities insist that a macadam road should never be level, arguing that a slight rise and fall is needed to permit the surface water to run longitudinally along the road. Usually, even if the road is absolutely level, if it is also properly crowned, the gutters of the road may be so graded as to provide suitably for surface drainage. The width of the grading will depend, of course, on the width of the macadam adopted.

## Water Softens Foundation.

Water should never be permitted to remain under a macadam road. It softens the foundation so that the broken stones are forced down into it by the wheels of vehicles, thus causing ruts to develop in the macadam. In freezing it expands and "heaves" the broken stones, destroying the bond between the stones and causing the larger stones to rise to the surface.

# The Boy Who Ran

The boy was running at a steady pace. The pace was not a fast one—it might have been called a jog trot. The boy trotted easily, his clenched hands against his breast, and his chin up. He might have been twenty, but he had a boyish look that was emphasized by his smooth cheeks, his curly hair and his big blue eyes.

His trot carried him by an elderly woman in a phaeton drawn by a fat and slow paced horse. He did not look around as he moved ahead. He was interested in his task, and more especially in the road ahead of him. The elderly woman looked after him curiously. Then her look suddenly changed.

"One of those invalids from the sanitarium, I 'spose," she murmured half aloud. "They do set 'em the most outlandish tasks. Poor boy, he's thin enough now without getting any thinner. An' he looked like quite a worthy young man, too."

She touched up the fat horse with the whip lash, but the sagacious animal merely shivered slightly and steadily plodded along.

Presently she came in sight of the boy. He was walking now, walking with a firm stride, his arms dangling and his head well up.

The old lady coaxed the fat horse into a trot.

"Now, Billy," she said, "you've been having things made easy for you all the way. Let's see how grateful you are. Gitap."

The fat horse, as if acknowledging the possession of a conscience, quickened his pace, and after a little steady effort caught up with the stranger whose pace had again slackened.

The woman drew the fat horse down to a walk.

"Good mornin', young man," she said in her brisk and yet pleasant voice. "How do you find yourself this morning? Better, I hope?"

The boy looked up at her. She noticed that he had high cheek bones and many freckles. And there were two red spots on his freckled cheeks.

"Yes, ma'am, better," he answered and there was a queer twinkle in his blue eyes.

"I'm glad o' that," she said. "It seemed to me that the treatment looked a little severe."

"It's the treatment I need, ma'am."

"But you can't gain any flesh running about the country in that way."

The blue eyes twinkled again.

"No, ma'am, but I can lose some."

She stared at him.

"Is it recommended to you by a doctor—a regular physician?"

"No, ma'am. It's recommended all right, but not just to me. But I know it's what I need. I ain't rich enough to have a doctor, so I'm lookin' after myself."

The gray eyes were dimmed by pity.

"Poor boy," she said.

The tone touched the stranger.

"I don't mind it," he laughed, "I'm pretty comfortable."

The mother's face was still clouded.

"I guess those doctorin' folks in the village mean well," she said, "but sometimes their ways of helpin' people seem a little severe. I'm goin' to the village. Won't you get in the buggy an' finish out your treatment a little more comfortably?"

He shook his curly head.

"That wouldn't help me any, thank you, ma'am. But I'll walk along side your carriage, if you'll let me."

"To be sure you may," the old lady replied. She drew up the reins and spoke to Billy.

"That's a fine fat horse you have, ma'am," said the stranger as he strode along by the carriage wheel.

"Billy is a pet and sadly spoiled," said the old lady.

"Maybe a little of my treatment would help him, ma'am."

They both laughed at this and then the kind old face grew grave.

"Do you cough?" she solicitously asked.

"No, ma'am."

"I did cough in some stages," she murmured.

"I did cough a little," he explained, "but that was before my broken rib slipped into place."

"You had a hurt then?"

"Yes, ma'am. It bothered me quite a bit. You see I didn't know anything about it until—until it was all over, and the bone jabbed me in the lung."

Again the kind old face clouded.

"I have an excellent sirup for coughs," she said, "but as far as I know it isn't good for anything else."

A smile lighted the freckled face.

"Thank you, ma'am. If I get a cough I'd be glad to try it."

The old lady nodded.

"My name is Miss Summers," she said, "Ellen Summers. My home is back on the road where the big oak stands by the gate."

"I know the place, ma'am, an' a fine little place it is. An' a great oak it is, too. Sometime I'll drop in when I'm runnin' by an' have a taste from the gass that stands on the old well box, ma'am."

"You'll be quite welcome," the old lady told him. "We think the water is very good. An' there is always plenty of cold milk in the cellar, an' very often a pitcher of buttermilk."

"Thank you kindly, ma'am, I won't forget. But here's where I turn down the side street—an' so I wish you a very good day, ma'am."

She watched the slender figure as it strode away, and sighed.

"Poor boy," she murmured.

"'spose they are very often like that—so sure they are going to get well again. An' maybe, it's just as well the folks don't tell him the truth."

And old Billy plodded along at his favorite gait and was no reproved.

It was two days later that the boy opened the gate and came out the path in the wide spreading shadow of the great oak.

The old lady was sitting on her vine covered porch. She shaded her eyes with her hand as he approached. He took off his cap.

"How do you do, ma'am?" he said. "I hope you are well."

She knew him then.

"It's the young man who runs," she said. "I am glad to see you again. Will you seat yourself on the porch?"

"I'll sit here, ma'am, thank you," he said and balanced himself on the edge of the porch flooring.

She looked him over carefully, noting again the red spots on his freckled cheeks.

"And which shall it be?" she asked. "Water, or milk, or buttermilk?"

"It will be buttermilk, ma'am," he answered. "If not too much trouble."

She speedily brought him the pitcher and he drank two glasses with a great relish.

"It's fine," he smilingly told her. "And are you still continuing the treatment?" she asked him.

"Yes, ma'am," he answered, "an' it's helpin' me a great deal. I've lost three pounds in a week."

Her compassionate look came back. "And have you no home?" she asked.

"No, ma'am," he answered. "I can't remember that I ever had a home. I'm just a boy out of the streets. I've taken a lot o' hard knocks, but I've never seen th' day when I didn't have enough to eat an' some kind of a place to sleep. An' that's about all there is to it, ma'am."

She shot her head at this somewhat grim bit of philosophy, but before she could answer it he had drawn away from the porch.

"This won't do, ma'am," he said and his eyes kept up their twinkling. "I'm forgetting the treatment. Every moment I loiter here adds an ounce or two to my weight. Goodby, ma'am, an' heaven keep you." And he loped down the walk to the highway and disappeared behind the high hedge.

"I wish old Dr. Phipps could see him," said the lady. "I feel sure his treatment is too severe. Poor boy, with no home, and nowhere to go in his last illness. I'll talk to Dr. Phipps about it."

Next day the good lady was urging old Billy to a faster gait when the boy, walking briskly, came along side the ancient phaeton.

"Good mornin', ma'am."

"Good mornin'." She looked at him closely. "Did you sleep well last night?" she asked.

"Never slept better," he answered. "An' I've lost nearly another pound, ma'am. If I can get rid of two more I'll be in fine shape."

He laughed as he said this and nodded contentedly.

Her heart warmed to him. He was so light hearted, so carefree, so indifferent to his own condition.

"I'm afraid it's not the right treatment," she said. "I wish to call in old Dr. Phipps. I will gladly assume the expenses. Come and make my house your home while he studies your case."

She spoke gently yet earnestly and the boy was much affected by her words.

"You're very good, ma'am," he said. "Better to me than anyone ever was before. You don't know who or what I am, an' yet, you offer me a home. I ain't worth it, ma'am. I'm a bad lot. You're all mistaken about me. Listen, ma'am, an' I'll tell you the truth."

But before he could say more a sudden interruption startled them. From a cabin a few hundreds of feet from the highway, came a shrill scream.

The old lady stopped the fat horse. "That's Bob Harris beating his wife," she said. "The miserable wretch must had a glass too much. Liquor makes him fighting mad."

Another scream rent the air. The boy squirmed uneasily.

"He's a cowardly dog," he growled. "He's an ugly brute," said the old lady. "An' he's big and dangerous."

The boy hesitated.

"I—I would like to give him a wallop or two that he wouldn't forget, but I'm afraid," he said. "I'm afraid of getting hurt."

He flushed as he said this, but the old lady didn't notice him. Her gray eyes were fixed on the cabin door.

"He certainly would hurt you," she said.

The boy drew a quick breath.

"The first thing I remember hearing," he said, "was the scream of my poor mother when my brute of a father whipped her. I made up my mind that there would be no wife beating in any part of the town where I happened to be—and here I am, afraid the first time I hear a woman scream. But understand me, ma'am. I'm not afraid in my mind, but in my body. A single blow would spoil all the good work I've been doing. It's a shame, ma'am. It makes me blush."

"I don't blame you," said the woman. "You're weak and ill and Bob Harris is ugly and big and strong. I think I'll go and reason with him."

Before she could step from the phaeton a half dozen cries of sharp pain rent the air. The boy saw the woman recoil and noted the pallor that overspread her face. He flung his cap on the floor of the phaeton, and tossed his coat after it. Then he leaped the fence and ran toward the cottage. When he reached the house he pushed open the door and entered. A moment after a babel of indistinct cries arose from the Harris home. This was followed by the sudden reappearance of the boy. He was in full retreat followed closely by the terrible Harris.

The boy ran a little ways and then something remarkable happened. The fat man suddenly turned and attacked the big runner with tremendous vigor.

He rained blow after blow upon the wife beater. The brutal husband tried to ward off the attack, but hadn't the skill. He was forced backward, shouting and cursing. The boy, closely following, with lightning strokes, hammered down the big man's defense and finally forced him to the ground. As he fell he struck his head against the side of the house.

The boy was over the prostrate form in a flash and catching up the ruffian's head by the ears, banged it rudely against the side of the house.

At this the woman in the phaeton suddenly turned away.

Presently the banging stopped and the voice of the boy was heard. The woman could not hear the man's reply, but the banging at once recommenced. Then it suddenly stopped and the boy spoke again.

When the woman looked around he was climbing the fence and the man had disappeared. The boy took his cap and coat.

"He won't beat his wife again," he said. "He promised me. If he breaks his word I'll give him what I promised him."

The woman looked at him with something like admiring awe.

"Did—did you hurt him much?" she asked.

"I hurt him enough to make him go slow when he thinks of hurting his wife. It's lucky I didn't hurt him a good deal more."

His tone suddenly grew bitter.

"I—I made a fool of myself."

"I don't understand," said the woman.

"I lost my temper. That's the trouble with me. He made me mad. I should have laughed. Instead of that I got wild. I'll never succeed until I can keep a tight grip on my temper."

He seemed so discouraged that the woman put out her hand and laid it gently on his arm.

"Why," she cried, "you are hurt!"

"My knuckles are bleeding, that's all," he answered. "It doesn't matter."

"Get into the buggy," said the woman. "I'm going to take you home and tie up your hands. It's a small enough return to the man who has taught that dreadful Harris a lesson."

He took the seat meekly and she drove home and put a soothing liniment on his torn hands and tied them up and gave him food and drink. And presently he was resting in one of the easy rockers on the shaded porch.

"Are you quite comfortable?" the woman asked.

"I'm all right," he smilingly answered.

"And your unaccustomed exercise hasn't hurt you any?"

"Not a bit, ma'am."

She looked at him admiringly.

"You are quite wonderful," she said. "You come here, an' invalid, and soundly whip Bob Harris, who is considered a great fighter, and make him beg for mercy, and then you say the exercise hasn't hurt you any."

The face of the boy grew grave. He hesitated a moment.

"Lady," he said, "I hate to tell you what I'm going to tell, but I must. You're all wrong about me—and I've let you go on making the mistake. I'm not an invalid. I'm not sick. I'm thin, perhaps, but I'm as hard as nails and strong as a horse. I came to the village because it's a quiet place and I've a friend there. And I've been running these roads to improve my wind and to get my weight down a few pounds lower. When I said I was afraid of being hurt it was true. To get hurt foolish is a serious thing in my business."

He paused and looked at the woman.

"What is your business?" she asked and her voice faltered.

"Lady," he slowly answered, "you have been very good to me—kinder than any woman I have ever known. I hate to hurt your feelings. But I'm going to square with you. My name is Danny Crane. I'm a professional fighter, a prize fighter. Two weeks from to-day I am to fight for the lightweight championship."

He paused and looked out across the garden.

The woman sat very still. Her Puritan instincts were outraged by this confession. All her life-long moral training revolted against it. The roof of her quiet porch was sheltering a degraded creature of the shameless arena. She looked at the boyish face and the bandaged hands.

A moment later Danny Crane felt a light touch on his shoulder. He looked up quickly and encountered the woman's misty gaze.

"I'm sorry you're a fighter," she softly said, "but if you must fight"—she drew a quick breath—"I hope you'll fight to win."—W. R. Rose, in Cleveland Plain Dealer.

**Cat Saved Life of Mistress.**

Mme. Marie Rayot's cat saved her mistress' life one morning last month. Mme. Rayot, who lives in Paris, heard the cat mew loudly, and jumped out of bed, thinking that it was after her birds, which were in the next room. As Mme. Rayot rushed into this room a burglar knocked her candle from her hand and caught her by the throat and attempted to strangle her. He let her go, however, with a cry of pain, and when Mme. Rayot's shrieks brought in the neighbors it was found that the cat had scratched out one of his eyes. An accomplice of the burglar was found hiding under a bed.

# BEEES AND BEE KEEPING

FOR BEGINNERS WITH BEES.

Suggestions Which May Make His First Year Successful.

A few suggestions may be helpful to the beginner in bee keeping and enable him to make his first year's work a marked success.

1. Shade your hives if possible with trees carrying heavy foliage. Swarms should be shaded from nine a. m. to five p. m. during the hottest season of the year.

2. Get a super of honey from the hive wintered over by putting a super containing sections with full sheets of foundation or a super containing extracting frames on the hive as soon as there is a good working force.

3. When the swarm issues remove the super from the old and place it upon the new stand. Your new swarm will not leave their hive and will be quite likely to continue working in the super.

4. Arrange a wind-break to prevent looted bees from being dashed against the hive fronts by the prevailing strong winds.

5. Provide supports for the hives which will lift them a foot or more from the ground. Ants and insect-eating animals may give trouble if the hives are on the ground.

6. Get your extra hives and supers set up for use several weeks before any swarms are expected or the honey flow may be half over before you are ready to take care of it.

7. Keep all comb-honey in moth proof cases and examine frequently.

8. Set the hive with the front of the bottom board a half-inch lower than the back but it should be level sidewise or combs will be built at an angle with the frames or sections.

9. Do not attempt to handle bees on cold damp days but while they are working in the field.

10. If bees are found hanging in chains in a super do not smoke them down, thinking they are idlers, for they are probably secreting wax.

11. Prevent much swarming by removing extra queen cells and by giving plenty of space at the bottom. Strong swarms produce surplus honey.

12. Grow with your business by reading a bee journal, a bee book, or both.

## Syrup for Bees.

The best food at all times if it could be given is certainly honey, but in its place the only substitute admissible is pure sugar in the form of syrup.

Syrup is best used when a supply must be given quickly as in the case of a colony on the verge of starvation, or at the end of the season when making up the necessary quantity of food for wintering. There must, however, be a difference in the consistency in the spring and autumn syrups—in fact, the latter should be about twice that of the former. The reason for this is that in the spring the bees leave the hive for water with which to thin the food they, in their capacity of nurse bees, prepare for the queen and grubs; and when syrup is given with a good proportion of water, these journeys to the pump or drains are rendered unnecessary, while in the autumn, unless syrup about the consistency of honey is supplied the bees will have considerable trouble in getting rid of the superfluous moisture in order to seal it over; and if they could not do this the syrup remaining exposed might, and probably would, ferment and cause dysentery.—F. G. Herman.

## Water for the Bees.

Give the bees plenty of water. They need a great deal and will fly a long distance to get it.

If there is no running stream or lake of pure water near it is well to place a pail of fresh water near the apiary every day.

Bees use water to dilute the heavy, thick honey left over from winter to make it suitable for the young larvae and also to make the cell wax pliable.

Bees should be protected from the wind on the north and west by a close set hedge or high fence.

All the weeds should be kept down in front of the hives. In a plot 6 feet wide and then cut the weeds and grass close to the ground with a hoe.

An hour once a week spent on the care of the bees will bring larger returns for the effort than any other labor on the farm.

A newspaper man in Chicago, who lives a few miles out in the country, last year sold \$225 worth of honey to three big hotels. He says he did not spend more than an hour a week looking after his bees during the season.—F. and D. Journal.

## Feed Judiciously.

Food given judiciously is of immense advantage, for without it many bee keepers would, undoubtedly, have empty instead of full supers. Food in some form may be required in the spring to help on a colony to its full strength in readiness for the honey flow; it is none the less needful during the summer, when through a continuance of unfavorable weather loss by death is otherwise inevitable; but it is often of supreme importance at the end of the season, so that there shall be surrounding the bees food enough to serve not only for the daily wants, but also through the early part of the year, when the new honey is not being gathered the stores are drawn upon largely for brood rearing.

# ROLL of HONOR

Attention is called to the STRENGTH of the

Wayne County

SAVINGS BANK

The FINANCIER of New York City has published a ROLL OF HONOR of the 11,470 State Banks and Trust Companies of United States. In this list the WAYNE COUNTY SAVINGS BANK

Stands 38th in the United States.

Stands 10th in Pennsylvania.

Stands FIRST in Wayne County.

Capital, Surplus, \$455,000.00

Total ASSETS, \$2,733,000.00

Honesdale, Pa., May 29 1908.

NEW YORK ONTARIO AND WESTERN SAVINGS BANK

Time Table in Effect June 20th, 1909.

## SCRANTON DIVISION

Stations	Scranton	Wayne	Scranton	Wayne	Scranton
Scranton	11:00	11:00	11:00	11:00	11:00
Wayne	11:15	11:15	11:15	11:15	11:15
Scranton	11:30	11:30	11:30	11:30	11:30
Wayne	11:45	11:45	11:45	11:45	