HINTS FOR PATHMASTERS.

How Roads May Be Made and Kept in Good Repair.

1. Every good road has two essential features:

(a) A thoroughly dry foundation.

(b) A smooth, hard, waterproof surface covering.

2. The foundation is the natural subsoil, "the dirt road," which must be kept dry by good drainage.

3. The surface covering is generally a coating of gravel or broken stone which should be put on the road in such a way that it will not, in wet weather, be churned up and mixed with the earth beneath. That is, it should form a distinct coating.

4. To accomplish this:

(a) The gravel or stone should contain very little sand or clay—it should be clean.

(b) The road must be crowned or rounded in the centre so as to shed the water to the open drains.

(c) Ruts must not be allowed to form as they prevent water passing to the open drains.

(d) The open drains must have a sufficient fall, and free outlet so that the water will not stand in them but will be carried away immediately.

(e) Tile under-drains should be laid wherever the open drains are not sufficient and the ground has a moist or wet appearance, with a tendency to absorb the gravel and rut readily. By this means the foundation is made dry.

5. Do not leave the gravel or stone just as it drops from the wagon but spread it so that travel will at once pass over and consolidate it before the fall rains.

6. Keep the road metal raked or scraped into the wheel or horse tracks until consolidated.

7. Grade and crown the road before putting on gravel or stone.

8. If a grading machine is available, grade the roads which you intend to gravel before the time of statute labor, and use the statute labor as far as possible in drawing gravel.

9. A fair crown for gravel roads on level ground is one inch of rise to each foot of width from the side to the centre.

10. The roads on hills should have a greater crown than on level ground otherwise the water will follow the wheel tracks and create deep ruts, instead of passing to the side drains. One and one half inches to the foot from the side to the centre will be sufficient.

11. Repair old gravel roads which have a hard centre but too little crown and high, square shoulders, by cutting off the shoulders, turning the material outward and placing new gravel or stone in the centre. Do not cover the old gravel foundation with the mixture of earth, sod and fine gravel of which the shoulders are composed. The shoulders can be most easily cut off by means of a grading machine.

12. A width of twenty-four feet between ditches will meet most conditions, with the central eight feet gravelled.

13. Wherever water stands on the roadway or by the roadside or wherever the ground remains moist or is swampy in spring and fall, better drainage is needed.

14. Look over the road under your charge after heavy rains and during spring freshets. The work of a few minutes in freeing drains from obstruction or diverting a current of water into a proper channel may become the work of days if neglected.

15. Surface water should be disposed of in small quantities, great accumulations are hard to handle and are destructive. Obtain outlets into natural watercourses as often as possible.

16. Instead of having deep, open ditches to underdrain the road and dry the foundation, use tile.

17. Give culverts a good fall and free outlet so that water will not freeze in them.

18. In taking gravel from the pit, see that precautions are taken to draw only clean material. Do not let the face of the pit be scraped down, mixing clay, sand and turf with good gravel. There is a tendency to draw dirty gravel as it is easiest to handle.

19. Gravel which retains a perpendicular face in the pit in the spring, and shows no trace of slipping is generally fit for use on the road without treatment. Dirty gravel should be screened.

20. Plan and lay out the work before calling out the men.

21. When preparing plans keep the work of succeeding years in view.

22. Call out for each day only such a number of men and teams as can be properly directed.

23. In laying out the work, estimate on a full day's work from each man and see that it is performed. Specify the number of loads of gravel to constitute a day's work. Every wagon box should hold a quarter of a cord.

24. Make all returns clearly, showing who have done their work and who have not.

25. Make early arrangements for having on the ground when required, and in good repair, all implements and tools to be used in the performance of statute labor.

26. Do all work with a view to permanence and durability. — Municipal World.

A SIDE-LIGHT ON HISTORY.

The manipulations of the world's first woman barber soothed the strong man to sleep.

Presently, however, he awoke, looked hastily at himself in the large plate-glass mirror, put on his coat and started to go.

Delilah stopped him.

Samson, she said, that hair-cut is 25 cents!

Samson weakened, and presently the Philistines had him.

Some men are candidates for office because they can't help it—and some because the people can't help it.

That Tired Feeling

What does it mean? As tired in the morning as at night, can't get rested, nervous, sleepless, dull, languid.

It means that the blood is poor. Muscles cannot be elastic and strong, nerves cannot be steady, energy and vigor cannot be felt, when the blood is impure, impoverished without nourishing power.

Hood's Sarsaparilla imparts to the blood the qualities it lacks when that tired feeling troubles you. It makes the blood rich, pure, full of vitality. It cures spring languor and eradicates all foul taints from the blood, thus guarding against future danger from fevers, malaria, and other serious illness. Be sure to get.

Hood's Sarsaparilla

Canada's Greatest Medicine. $1; six for $5. Prepared only by C. I. Hood & Co., Lowell, Mass.

Hood's Pills cure liver ills; easy to take, easy to operate. 25c.

GOLD FISH RAISING.

In Oldenburg, Germany, is one of the largest goldfish farms. More than a hundred small ponds contain the fish in all stages of growth, the little ones carefully kept from the rapacious big fellows of eight inches, which would be delighted to eat their helpless brethren. In spite of this, the goldfish is a great coward, and a tiny fish with the courage to attack it can frighten it almost to death. That the demand for goldfish is large is shown by the fact that from the fish farms of Oldenburg over 300,000 fish are sent to market every year.

ACTIVE MAN WANTED

To read this advertisement and then give Putnam's Painless Corn Extractor a trial. It never fails to cure. Acts in twenty-four hours and causes neither pain not discomfort. Putnam's Corn Extractor extracts corns. It is the best.

HE AGREED.

Mrs. Higgins—What wretched taste that Mrs. Wilkins has.

Mr. Higgins—Yes. I met her downtown this afternoon and she was wearing that ugly old $25 hat you thought you wanted.

TO CURE A COLD IN ONE DAY.

Take Laxative Bromo Quinine Tablets. All Druggists refund the money if it fails to Cure. 25c.

KIND-HEARTED MAN.

We ought to worry more over other people's troubles than our own.

I do. I worry over my creditors troubles.

What are they?

My debts.

Quickcure for Skin Diseases, 15c., 25c., 50c.

HOW A BASHFUL MAN GOT A WIFE.

Blusher is the most bashful man I ever knew.

How on earth, then, did he come to get married?

He was too bashful to refuse.

Quickcure for Bunions, 15c., 25c., 50c.

USELESS ADVICE.

Wiggles—My physician has ordered me never to take active exercise after a hearty meal.

Waggles—Well, what of it?

Wiggles—I board.

Quickcure for Whitlows, 15c., 25c., 50c.

INHERITED.

Governess—I never in my life saw a little girl so wilful, exacting, cross, and unreasonable as you are.

Little Girl—I dess I takes after my step-mother.

MANITOBA FARMS FOR SALE

Near the City of WINNIPEG, MANITOBA.

A very desirable Grain, Stock and Dairy Farm. Nicely situated about four miles from the City of Winnipeg, fronting on west side of Red River. Close to Markets, etc. The Farm is about 20 chains wide along the River, containing about 489 Acres, of which over 300 is fenced 110 now under cultivation. Soil is a black loam. Latest improved Buildings, consisting of two good Frame Dwelling Houses. Large frame Bank Barn, metal sheeted, 70 x 30 feet. With frost-proof Stable underneath, accommodating over forty head of stock; Root House accessible all winter; Loft storage for about 00 tons of hay; all under the one roof.

Also Near Rapid City.

Rapid City is situated north of Brandon, on the Manitoba and North-Western Railway, an also a station on the Great North-West Central Railway from Brandon. In Rapid City there are grist mills with elevators, woollen mills, saw mills and lumber yards, brick yards etc. 320 acres being the west half of section 32, township 13, range 20 west. Land is undulating prairie, and considered the finest for grain, dairy or stock farming. Building material is handy. Good water. Adjoining are all prosperous farmers.

Also

South half of section 9, township 14, range 20 west,—320 acres. This half section lies north and near the above section, consisting of undulating prairie and some extra good hay land. Schools post office, blacksmith, etc., on corner of section. Excellent water. Terms not less than one quarter cash, balance on time.—Apply to

ALEXANDER NAIRN, 415 Jarvis St., Toronto.

A SERIOUS LACK.

Young Mr. Forundred, in Squash Center—Aw, my good man, do you evah have fox-hunts heah?

Native—Nope.

What is the mattah? No foxes?

Plenty of foxes.

No dogs?

Plenty o' dogs.

No horses?

Plenty o' horses.

Then—aw—what is the mattah?

No fools.

THE NEW WOMAN

Now enters upon pursuits formerly monopolized by men. But the feminine nerves are still hers and she suffers from toothache. To her we recommend Nerviline—nerve-pain cure—cures toothache in a moment. Nerviline, the most marvellous pain remedy known to science. Nerviline may be used efficaciously for all nerve pain.

BEST HE HAD.

Lester dear, said Mrs. Giddings, anxiously to her husband, I don't like that cough of yours.

I'm sorry, replied Giddings, but it is the best I have.

Quickcure for Cracked lips, 15c., 25c., 50c.

SIAM'S PECULIAR ORDER.

Not long back his Majesty of Siam gave an Italian, for painting one of his wives from a photograph, "the Grand Cross of the Siamese Crown," It is a rather large order. "This cross," said his Majesty, graciously, "will entitle you to marry twelve wives. It is a distinction I seldom confer, so I hope you will make good use of it."

ALBERTS THOMAS PHOSPHATE POWDER

COMMENDABLE AMBITION.

Then you don't believe in prestige derived from ancestors?

Not a bit; I believe in fixing things so my ancestors will derive prestige from me.

$100 Reward $100.

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is Catarrh. Hall's Catarrh Cure is the only positive cure known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials.

Address F. J. CHENEY & CO., Toledo, O.
Sold by Druggists, 75c.
Hall's Family Pills are the best.

MONEY WELL INVESTED.

Doesn't Jimper bore you to death?

He never comes near me since I lent him $2.

Cheap enough.

Quickcure for Cold Sores, 15c., 25c., 50c.

Edward Evans, jr., was recently unanimously re-elected president of the Liverpool Liberal Federal Council.

W P C 920

BOATS and CANOES. Write for catalogue. WALTER DEAN, - 1751, Queen St. W., Toronto.

YOUNG LADIES $60 MONTHLY Working evenings for us. Steady, pleasant employment. Send 15c. for samples. Independent Lotion Co., Toronto, Ont.

MINERALS TESTED for Gold, etc. Write for prices. MILTON L. HERSEY, B. A. Sc., 16 St. Sacrament St., Montreal, Que.

FARMS AND ESTATES bought, sold & exchanged. Terms mailed free. H. M. SIMPSON, Real Estate and Financial Agent, Montreal, Que.

LAW Mills, Mills & Hales, Barristers, etc., removed to Wesley Bldgs., Richmond St. W., Toronto.

BEES Italian and Hybrids—best Queens. All Bee Supplies—best quality Weed Patent Process Foundation. Wax Wanted Cash or trade. Goold, Shapley & Muir Co. Limited, Brantford, Can.

WOOD & PHOTO ENGRAVING J. L. JONES ENG. CO. 6 8 10 ADELAIDE ST W. TORONTO

SHIP YOUR PRODUCE, Butter, Eggs, Apples, Fruit, &c., to THE DAWSON COMMISSION CO., Limited, Cor. of West Market and Colborne Sts., TORONTO

AGENTS WANTED THROUGHOUT Canada. Quick selling lines. Sample, terms and catalogue 5c. stamps. MANUFACTURERS' AGENCY ASSOCIATION, 20 Alexis St., Montreal.

Love Yourself. Harris Buys Scrap. 25-31 William St., Toronto. Phone 1729.

ROOFING and Sheet Metal Works. ROOFING SLATE, in Black, Red or Green. SLATE BLACKBOARDS (We supply Public and High Schools, Toronto). Roofing Felt, Pitch, Coal Tar, etc. ROOFING TILE (See New City Buildings, Toronto, done by our firm). Metal Ceilings, Cornices, etc. Estimates furnished for work complete or for materials shipped to any part of the country. Phone 1953. D. DUTHIE & SONS, Adelaide & Widmer Sts., Toronto.

A Well-Known Fact

The flavor of LUDELLA Ceylon Tea is exquisite, and in point of excellence there is no tea superior to it.

Lead packages. 25, 40, 50 and 60c.

Send us your name and address on a postal and we will be pleased to send you a sample of

MONSOON INDO-CEYLON TEA.

The most delicious tea in the world.

THE MONSOON TEA CO., 7 Wellington St. W., Toronto.

Fence, Fence—We can cut your 1898 Fence account in half. We claim we have the best and most practical fence on earth. Four miles of it in use at the Experimental Farm, Guelph, Ont. Send for prices. Address Toronto Picket Wire Fence Co., 231 River St. Toronto, Ont.

STAMMERERS. ADDRESS CHURCH'S AUTO-VOCE INSTITUTE, 9 Pembroke St., Toronto, Canada. CURE GUARANTEED.

Dominion Line Steamships.

Montreal and Quebec to Liverpool in summer. Large and fast twin screw steamships 'Labrador,' 'Vancouver,' 'Dominion,' 'Scotsman,' 'Yorkshire.' Superior accommodation for First Cabin, Second Cabin and Steerage passengers. Rates of passage—First Cabin, $52.50; Second Cabin, $34; Steerage $22.50 and upwards according to steamer and berth. For all information apply to Local Agents, or DAVID TORRANCE & Co., Gen'l Agents, 17 St. Sacrament St., Montreal.

CONBOY'S IMPROVED CARRIAGE TOPS

received the highest awards at the World's Fair 1893. CONBOY'S PATENT ROLLER TOPS have met with such universal favor, that other manufacturers are now making inferior imitations. Insist on having the Conboy make as imitations are never as good as the genuine.

CANADA PERMANENT Loan and Savings Company.

INCORPORATED 1855.

Paid-up Capital..... $ 2,600,000
Assets..... 11,400,000

Head Office—Toronto St., Toronto.
Branch Offices—Winnipeg, Man. Vancouver, B.C.

DEPOSITS received at interest payable half yearly.

DEBENTURES issued for money deposited for three or five years.

MONEY ADVANCED on Real Estate at low rates of interest and on favorable conditions.

Land Mortgages and Municipal or School Debentures purchased.

Information may be obtained from, and applications may be made to

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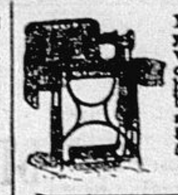


MOTHERS and Daughters, you can do plain and artistic work with our sewing machines fully equipped with hemmers, tuckers, binder, braider, puffer, quilter, ruffler and sherrer. Price $18.50 and $23.00, delivered free within 500 miles of Montreal. THE BAILEY DONALDSON CO., MONTREAL.

BARGAINS IN MANITOBA FARMS, IN SEVERAL municipalities; for particulars address, O. NEWCOMBE, Toronto.

Established 1854. 33 Steamers aggregating 135,000 Tons.

ALLAN LINE Royal Mail Steamship Co.,

Montreal to Liverpool.

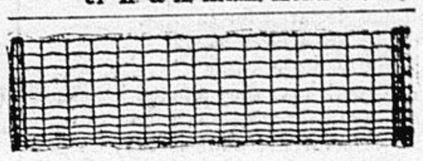
Steamers sail from Montreal every Saturday morning on arrival of trains from Toronto and the West about 9 o'clock.

RATES OF PASSAGE

Cabin $52.50 and upwards; Second Cabin $34 and and $36.25; Steerage to Liverpool, London, Glasgow, Belfast, Londonderry or Queenstown $22.50 and $23.50.

A reduction of five per cent. is allowed on round trip first and second cabin tickets. For sailings of steamers or other information apply to any authorized agent.

H. Bourlier, 1 King St. W. Toronto, or H. & A. Allan, Montreal.



SAVED BY A DREAM.

Farmer Oak, setting posts for Page fence, is set upon by another agent with a machine to "make it yourself, just as good," etc., etc., who soon talks him to sleep. He dreams he's back at the World's Fair, almost famished, can't live without a good cup of coffee, quick. Meets stranger with machine. "You buy the green berry, anything cheap, roast carefully, grind in this: perfectly delicious." "Oh yes, of course, you must steep it, and sugar and cream it, —takes a little time, but it's so cheap." Here the nightmare kicks the agent off the field and brings farmer O. to his senses, and he'll use the Page. Farm styles at from 45 to 65 cents per rod. Send for illustrated advertising matter.

THE PAGE WIRE FENCE COMPANY, Limited, WALKERVILLE, ONT.

RAIR PRODUCER — What? "AMBERINE" — CURES DANDRUFF

Over 300 are using it in Hamilton. Over 1000 in Toronto and London.

Removes Dandruff in One Week. Cures Itching of the Scalp. Prevents Breaking of Hair. Stops Falling Out.

POSITIVELY GROWS HAIR.

SWORN TESTIMONIALS SENT FREE.

"HAIR PRODUCER" $1.00 per Bottle from Druggists, or on receipt of price to Jeb Cook Mf'g Co., London, Ont.

ENDORSED BY CLERGY — SURE! — TESTIMONY UNDER OATH

SEEDS 12 Varieties For 25c

This is a BONA FIDE offer made to introduce our Vegetable and Flower Seeds to new customers and which we guarantee to please you or the amount paid refunded and the Seeds given as a present.

At these prices we can ONLY offer the varieties named below. Order by number. Buy what you want. They are sent by mail post paid. Select from the following list:

VEGETABLES. (Order by Number.)

1. Beet, Eclipse, round
2. Beet, Egyptian, flat round
3. Cabbage, Winningstadt
4. Cabbage, Fottler's Brunswick
5. Carrot, half long, scarlet
6. Carrot, Guerande scarlet
7. Cucumber, Chicago Pickling
8. Cucumber, Long Green
9. Celery, Golden Self-Blanching
10. Herbs, Sage
11. Herbs, Savory
12. Herbs, Marjoram
13. Lettuce, Nonpareil (Cabbage)
14. Lettuce, Denver Market (curled)
15. Musk Melon, extra early, Nutmeg
16. Water Melon, Early Canada
17. Onion, large red Wethersfield
18. Onion, Yellow Globe Danvers
19. Parsnip, Hollow Crown
20. Radish, French Breakfast
21. Radish, Rosy Gem
22. Squash, Hubbard
23. Tomato, extra early Atlantic
24. Tomato, Dwarf Champion

FLOWERS.

25. Asters, mixed
26. Mignonette, sweet
27. Pansy, mixed
28. Petunia, mixed
29. Nasturtiums, tall mixed
30. Sweet Peas, Fine mixed
31. Wild Flower, Garden mixed

FREE WITH EVERY ORDER Providing this Coupon is CUT OUT and sent to us with an order for 12 packets, we will include 1 packet New Giant Chilian Salpiglossis, price 20c. Free of Charge TO SUBSCRIBERS OF THIS PAPER.

No. 5 Carrot, Half Long Danvers.

We will NOT ACCEPT AN ORDER at these prices where the packets are NOT selected from the above list.

Address all orders to **WM. RENNIE, TORONTO.**

Don't send Postage Stamps