FARM · FIELD AND GARDEN

METHODS OF DRAINAGE.

While open ditches for land drainage may be necessary and under certain conditions "the only way;" they must be considered as decidedly objectionable where tiles can be used. The open ditch obstructs the various forms of tillage and all farm operations. Its first cost is expensive as compared with the tile because much more labor must be expended in the digging of an open ditch. It is liable to be partially filled in by the tramping of stock, if the land is pastured, by the action of frost and the growth of weeds, so that its usefulness will be impaired. An obstructed channel for the free passage of water is a first essential in farm drainage and this can only be secured as a permanent improvement in the covered tile drain.

So while other materials may serve a temporary purpose in drainage, tiles are so much superior in point of cost when durability and results are measured; as to hardly admit of devoting any space to the discussion of other methods.

The problem of farm drainage is to lower the water table (by which we mean the body of stagnant water found in all soils at a greater or less distance from the surface), so that it will not interfere with the growth of crops. Proper drainage leaves the particles of soil full of moisture but the spaces between the particles are free and open for the admission of air.

The earlier advocates of tile drainage favored drains four or five feet deep. It is a well established fact that the deeper the drain the farther it will drain the water, so at first sight it would seem economical to

DRAIN DEEP.

When, however, we stop to consider the extra cost of digging the deep ditch we shall see that it is the most costly. It often costs as much to dig the last foot in a ditch four feet deep as it did to dig the first three. Of course in any system of drainage there will be likely to be places where the ditch must be deep in order to get the proper fall; but we think the best authorities do not advocate placing the average tile drain more than two and a half to three feet deep. Muck lands that would be likely to settle a good deal after draining would be an exception.

The size of tiles so that they may have sufficient capacity to carry off the water quickly should be carefully considered. The rule is that the capacity of tiles is to each other as the squares of their diameters. That is a tile two inches in diameter will carry four times as much water as a one-inch pipe; one three inches nine times as much. In the earlier days of tile drainage many small tiles were used which worked very well with the average rainfall; but were not able to carry off an extraordinary rainfall quick enough to prevent injury to the growing crops. The thing to provide for is the extraordinary amount of water that must be removed if crops are not to suffer. Larger tile is now the rule. I think most of the tiles laid now are not less than three inches.

In locating a system of drains the outlet demands most careful attention. It should be ample for the discharge of a full volume of water from the drains and well protected so that it will not be obstructed in any way. If conditions permit a substantial wall of stone through which the discharging tile passes, with the opening covered with wire to prevent the ingress of small animals, will be found satisfactory.

The fall required to secure effective drainage will depend largely on the skill employed in surveying the line and laying the tiles. A very moderate fall will answer when the details are attended to

IN THE BEST WAY.

Waring says one foot to the hundred feet is desirable, while one half that amount of fall, or six inches in one hundred feet, is quite sufficient if the execution of the work is carefully attended to.

The distance apart of the tile drains will depend on the kind of soil and the depth of the drains. On heavy clays the distance must be less to secure good drainage than on soils of loamy or gravelly character. No fixed rules can be given as to distance, that will always be safe to follow, as soils vary greatly in texture and capacity to retain moisture.

As a rule, it is wise to employ a skilled man to lay out and level the drains. This work must be done well or the drains will prove a failure. The grading well done, the tiles can be laid by anyone careful and painstaking.

If mistakes are made, grades wrong, a poor tile or carelessly laid, we must remember that if it is buried out of sight the mistake will be apparent in the condition of the land about the obstructed tile. Our outlay will be without benefit. Unless good tile are well laid in a properly graded ditch, it is a waste of money and labor. It is very difficult to locate an abstructed tile, and expensive to repair a poorly laid drain.

Tiles should be hard and well burned. Some if exposed to the frost are soft and crumble and are not worth laying. The water does not enter the tile through the pores to any great extent, as many suppose, but through the spaces between the tiles. Laid as carefully and closely as may be the water will find its way through the joints or ends.

If one is thinking of expending money and labor in drainage it will pay to look into and master all details as far as practicable. Too often such work is begun in haste, carried on in a haphazard way, and the results are not satisfactory.

MEDICINE FOR MEN.

Something That Will Banish Worries and Brace up the System.

Has it ever occurred to you that you need a medicine as Men—not as old men or young men, but as men? Are you never conscious that the special wear and tear of life which men sustain need repair? Worry wears a man out quicker than work, but worry is not an accident, it is a symptom—a symptom of nervous exhaustion. Other symptoms are nervous headache; morning laziness, that makes it difficult to get out of bed; a weak feeling in the back; indigestion; breathlessness after slight exertion; irritable temper—perhaps some nerve pain as neuralgia, sciatica or incipient paralysis. Dr. Williams' Pink Pills, as a medicine for men, act directly upon the source of discomfort. They restore manly vigor and energy, improve the appetite and tone up the nerves and the whole system. Mr. Neil H. McDonald, Estmere, N.B., is one of the many men who has proved the value of Dr. Williams' Pink Pills. He says: "I am glad to be able to say that I have found Dr. Williams' Pink Pills all that is claimed for them. I was completely run down; my appetite was poor, and I suffered much from severe headaches. Doctors medicine did not give me the needed relief, so I decided to try Dr. Williams' Pink Pills. I used only a few boxes when my former health returned, and now I feel like a new man."

Weak, nervous, broken down men—and women, too—will find new health and happiness in a fair use of Dr. Williams' Pink Pills. But be sure that you get the genuine with the full name "Dr. Williams' Pink Pills for Pale People" printed on the wrapper around every box. Sold by medicine dealers or sent by mail at 50 cents a box, or six boxes for $2.50, by writing The Dr. Williams Medicine Co., Brockville, Ont.

HOW TO MIX CEMENT.

Cement is coming generally into use as a substitute for lumber in the building of floors and the erection of silos and other farm buildings. The value of the cement structure will depend to a large extent upon the proportions in which to mix cement, sand and gravel. The amount of cement to use will depend upon the character of the gravel and sand, and therefore, it is difficult to lay down any hard and fast rule that will exactly serve in all cases. The following is a test or method recommended by the United States Government for ascertaining the right proportions to use and may be found helpful to those erecting cement structures:

Take of gravel a certain measure and shake it down to compact it; strike off the top with a straight edge; then measure water and pour into gravel until all voids are filled. The water used will show the amount of the mixture of cement and sand that will be required to make a proper concrete.

Repeat the operation, using sand instead of gravel, and the amount of water absorbed by the sand will show the amount of cement to add to the sand. But it must be borne in mind that the cement and sand mixed with water will not fill the same amount of space as before putting together and adding the water. That is, one cubic foot of cement and two cubic feet of sand will not, when mixed with water, make three cubic feet of mortar.

WATERING ANIMALS.

There should be a prescribed system for the regular watering of all animals on the farm. The belief is more common than it should be that water at long intervals is not only sufficient, but that it is the best way of treating cattle. Of course, this is a mistake, and one that ought to be apparent to all who give the matter any thought. In the first place, a thirsty state is an uncomfortable state for the animal to be in, and from motives of humanity it should be relieved. It is a condition directly opposed to good digestion. When thirst is allayed only when it has arrived at a stage of acute suffering, an overdose of water is taken, and that causes as much injury to the digestive organs as the thirsty condition which it supercedes. Cattle should, when on dry feed, get water.

TROUBLESOME BABIES.

Babies are not naturally troublesome—they should be bright, active and happy and a joy to your home. When baby is troublesome you may depend upon it there is some of the many minor ailments bothering him. These can all be overcome by the use of Baby's Own Tablets. Proof of this is given by Mrs. C. L. Marshall, Falkland Ridge, N. S., who says:—"I am pleased to state that I have used Baby's Own Tablets for my children with great success. I think the Tablets the very best medicine for all the ailments of small children and would recommend them to mothers who have troublesome babies."

Baby's Own Tablets cure constipation, indigestion, diarrhoea, prevent croup, allay irritation at teething time, break up colds and destroy worms. In fact there are none of the minor ailments of childhood which the Tablets will not cure. Sold by druggists or may be had at 25 cents a box by writing direct to Dr. Williams Medicine Co., Brockville, Ont.

JAMAICA NEGROES.

Much Humor and Philosophy in Their Quaint Maxims.

The Jamaica negroes have a lingo of their own. They laconically express thoughts of wisdom which would do credit to King Solomon. It is possible that aptitude for making maxims has been inherited from the Spaniards, who occupied the island until the middle of the seventeenth century. Their sayings cannot be compared in literary merit with the beautiful proverbs of the Spaniards, but they are filled with as deep philosophy, and, added to this, there appears therein a keen sense of humor something quite absent in the lingo of the American darkies.

Out of the mixture of philosophy and humor have come many quaint sayings which are as familiar in Jamaica as our own. Some of them are differently worded versions of familiar proverbs; still others express most aptly that which we have often thought in many words, but which they have condensed. Have you not heard some one say, "Oh, I don't mind her paying me a visit, but I would not have her live with me for the world?" The Jamaica negro sums this up thus: "Come see me is one ting (thing), come live with me is quite another."

When you have put yourself out to do a kindness and that kindness has been entirely unappreciated, how well does this apply: "De good you do, de tankey (thanks) you get." When you hear a man call another all sorts of names behind his back, but in his presence change his manner and vocabulary, becoming polite and civil, the proverb applied by the negro is "Behind dog, it is dog; before dog, it is Mr. Dog."

When they desire very much to do something and seek a reason, however trivial, therefor, they say, "When Toto want to go to Rio Manus, little wind come blow him there." "Every John Crow tink (think) him pickanniny white" needs no explanation. "To-day for you, tomorrow for me" takes the place of our "Every dog has his day." How trite is the saying, "Ceitful (deceitful) like the star apple leaf," the said leaf being double-faced, silver on one side, a dull green on the other. "No call alligator long mout (mouth) till you pass him by" would teach us to beware of calling others harsh names until out of their power.

Other proverbs that need no explanation are as follows:

"When cockroach give dance him no invite fowl." Naturally, for fowl would eat him.

"Maugre (poor) plantain better none at all" is very like our "half a loaf is better than none."

"Quattie (3 cents) buy trouble hundred pounds can't pay for."

"Shoes alone know if stockings got hole."

"Before dog go widout him supper him eat cockroach."

"Parson christen him own pickinny first."

"Ebry day is fishing day, but ebry day no for catch fish."

"Hog run for him life; dog run for him character."

"Ebery victual fer eat, but ebery story no fer talk."

"If snake bite you, you see lizard, you run."

"Follow fashion break monkey neck."

"Good friends better dan money wide pocket."

"Nanny goat neber scratch him back till him see wall."

"One tief no like see noder tief carry long bag."

"Cusscuss (curses) neber break hole in your head."

"Greedy, greedy choke puppy."

"Buckra (white man) work neber done."

"Little crab hole spoil big race horse."

Too much of the milk of human kindness savors of the pump.

The Mutual Life of Canada

34TH ANNUAL REPORT

Presented to the Annual Meeting of Policyholders, Thursday, March 3, 1904.

Gentlemen: Your Directors respectfully submit for your consideration their report of the business for the year ended December 31st, 1903, with the Financial Statement duly audited.

We are pleased to inform you that, in all branches, the business was of a most gratifying character, and that the new business was largely in excess of that of any other year in the history of the Company. The Surplus earnings were such as enabled us to continue the same very liberal scale of distribution to the Policyholders, as in the past. The death rate was slightly in advance of that of 1902, but still much below the expectation. The Lapses and Surrenders have been gradually decreasing for some time, and for the past year were comparatively moderate.

NEW and OLD BUSINESS.—The applications received for new business were 3,518 for $5,173,112, of which 47 for $72,500 were declined. The Policies issued were 3,333 for $5,011,390, and the amount of insurance now in force is, $37,587,551.58, under 25,730 policies, being an increase in amount of $3,118,631.

INCOME.—The net premium income, less reinsurance, was $1,254,986,47; Interest and Rents $306,007.48; Profit and Loss $76.08; Total Income $1,561,070.03.

PAYMENTS TO POLICYHOLDERS.—The payments to Policyholders were: Death Claims $253,586.95; Endowments $122,587; Purchased Policies $31,972.18; Surplus $77,300.28; Annuities $8,274.90; Total $493,721.31. Expense Account $282,728.43; Total Disbursements $776,449 74. Excess of income over expenditure $784,620.29.

The Cash Assets amount to $6,882,953.83; the Total Assets are $7,298,552.12, an increase over 1902 of $838,772.04.

LIABILITIES.—The total Liabilities are $6,676,224.19, including the requisite reserve of $6,617,714.89 for the security of Policyholders, computed at 4 per cent., 3½ per cent. and 3 per cent.

SURPLUS.—The Surplus of the Company's standard of valuation is $616,633.46, and on Government standard $878,466.00. The increase in Surplus is $117,483.22.

During the year the demand for money was active, and the funds were fully invested, at a somewhat better rate of interest, and in a class of securities entirely outside anything of a hazardous or speculative character. The payments on Principal and Interest were unusually well met there being only $5,998 overdue interest at the close of the year most of which has since been paid.

The Executive Committee examined all the securities, and compared them with the records, all of which were found correct, and in accordance with the statement herewith submitted.

The Manager, Officers and Staff continue to discharge their respective duties to the satisfaction of the Board.

You will be called upon to elect four Directors, in the place of the Hon. Mr. Justice Britton, Francis C. Bruce, M.P., J. Kerr Fisken and Geo. A. Somerville, whose term of office has expired, but all of whom are eligible for re-election.

On Behalf of the Board, ROBERT MELVIN, President.

FINANCIAL STATEMENT.

LEDGER ASSETS—Dec. 31st, 1902		$6,098,333.54
INCOME.		
Premiums (net)	$1,254,936.47	
Interest and rents	306,007.48	
Profit and Loss	76.08	
		$1,561,070.03
		$7,659,403.57
PAYMENTS TO POLICYHOLDERS.		
Death Claims	$253,586.95	
Matured Endowments	122,587.00	
Payments to Annuitants	8,274.90	
Purchased Policies	31,972.18	
Surplus paid to Policyholders	77,300.28	
	$ 493,721.31	
All other payments	282,728.43	
		$ 776,449.74
		$6,882,953.83
LEDGER ASSETS.		
Debentures and Bonds, Account Value	$2,643,334.07	
Mortgages	3,331,019.12	
Loans on Policies	792,833.03	
Loans on Loan Company stocks	10,000.00	
Liens on Policies	31,988.02	
Real Estate	46,504.85	
" " Company's Head Office	21,032.61	
All other items, including Cash in Banks & ctH.O.	6,242.08	
		$6,882,953.83
Additional Assets		409,903.82
TOTAL ASSETS		$7,292,857.65
LIABILITIES.		
Reserve on Policies in force 4p.c., 3½p.c. & 3p.c.	$6,617,714.89	
All other Liabilities	58,509.30	
		$6,676,224.19
Surplus Company's Standard 4%, 3½% and 3%		**$616,633.46**
Surplus Government Standard 4½% and 3½%		**$878,465.67**

Audited and found correct.

J. M. SCULLY, F.C.A. } Auditors.
J. SCULLY.

GEO. WEGENAST, Manager.

The growth of the Company during the past year may be seen in the following table:

	1902	1903	Increase.
New Assurance	$ 4,627,878	$ 5,011,390	$ 483,512
Assurance in force	34,468,920	37,587,551	3,118,631
Income	1,391,098	1,561,070	169,971
Assets	6,459,780	7,298,552	838,772
Surplus (Company's Standard)	499,150	616,633	117,483

The record of progress during the past 30 years is shown in the following figures for each 5 year period:

Year	Income.	Payments to Policyh'd'rs	Assets	Surplus	Assurance
1873	$ 16,435	$ 2,687	$ 23,144	$ 5,624	$ 701,000
1878	59,277	12,487	142,619	29,149	1,885,311
1883	199,182	58,833	583,705	43,761	6,572,719
1888	393,075	121,507	1,313,853	90,337	12,041,914
1893	626,208	212,272	2,593,424	226,120	17,751,107
1898	923,941	359,975	4,186,129	271,196	23,703,979
1903	1,561,070	493,721	7,298,552	616,633	37,587,551

The various reports having been adopted, the retiring directors were unanimously re-elected. After a number of able and thoughtful addresses had been made by members of the Board, prominent Policyholders, the agents and others, the meeting adjourned.

The Directors met subsequently and re-elected Mr. Robert Melvin, President; Mr. Alfred Hoskin, K.C., First Vice-President; and the Hon. Mr. Justice Britton, Second Vice-President of the Company for the ensuing year.

(Booklets containing full report, comprising lists of death and endowment claims paid, of securities held, and other interesting and instructive particulars are being issued and will in due course be distributed among policyholders and intending insurants.)

W. H. RIDDELL, Secretary.

Free of Disease At Eighty Years

Old People Everywhere Are Being Cured of Chronic Kidney Disease by

Dr. Chase's Kidney Liver Pills

As old age comes on it is usually the kidneys that first fail to do their duty as filters of the blood.

Uric acid poison gets into the system and the result is much suffering from backache, lumbago, rheumatism and pains in the sides and legs.

There is no medicine so well appreciated by the old people as Dr. Chase's Kidney-Liver Pills. They remove the cause of suffering.

Mr. R. J. McBain, Niagara Falls, Ont., a man of eighty years and well known throughout the Niagara district, writes: "I believe if it had not been for Dr. Chase's Kidney-Liver Pills I would be in my grave before this. I was very bad with kidney disease and suffered with dreadful pains in my kidneys. Being disappointed in the use of many medicines, I had almost given up hopes of ever getting better.

"One morning, after a night of especially severe suffering, a friend called to see me, and asked why I did not try Dr. Chase's Kidney-Liver Pills. I got a box at once, and took two pills, which was a rather heavy dose; one pill is plenty at a dose. I used them regularly for a month, and at the end of that time was a changed man.

It is now about five years since I began using this pill, and since that time I have felt as good as I did forty years ago. I am almost eighty years old, and am free from all disease, except rheumatism, and this is much better than it used to be before I used this medicine. I recommend Dr. Chase's Kidney-Liver Pills with all my heart to any person, man or woman. This is my opinion of these valuable pills, and you may use it for the benefit of others."

Dr. Chase's Kidney-Liver Pills one pill a dose, 25c a box at all dealers, or Edmanson, Bates & Co., Toronto. To protect you against imitations, the portrait and signature of Dr. A. W. Chase, the famous receipt book

Piles To prove to you that Dr. Chase's Ointment is a certain and absolute cure for each and every form of itching, bleeding and protruding piles the manufacturers have guaranteed it. See testimonials in the daily press and ask your neighbors what they think of it. You can use it and get your money back if not cured. 60c a box, all dealers or EDMANSON, BATES & CO., Toronto.

Dr. Chase's Ointment