

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL
IN THE DOMINION.

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JOHN WELD, MANAGER.

Agents for "The Farmer's Advocate and Home Journal,"
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1. THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday. It is impartial and independent of all cliques and parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers, of any publication in Canada.
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cementing tile outlets, and so on, we arrive at the following figures:

Total cost for thoroughly draining some seven acres of land, including a long, expensive main, with outlet through neighbor's property, was \$346.58, or about \$49.50 per acre. Cost of tile per rod of drain, 26 cents; total cost of labor, men and teams per rod of drain, 82 cents. Of course, with the outlet already provided, and experience gained concerning the particular conditions of this farm, by choosing expert men and favorable seasons for work, we hope to reduce the cost of future work to somewhere around thirty-five dollars per acre, this being for thorough drainage, knolls, as well as hollows.

Now, as to results. While thirty-five dollars per acre seems a large amount to add to the cost of a farm, we believe it is really one of the best investments a farmer can make, providing he can get hold of the capital. On the land where we did the most expensive tiling last summer, there is now as pretty a growth of alfalfa as one could wish to see. Scarcely a plant has been winter-killed. This cannot be said of the undrained land alongside. One season's return in alfalfa from such land will go far to wipe out the cost of tiling, even under the unfavorable conditions of unskilled ditchers working in midsummer. By the way, in certain veins of fine, silty clay and sand mixture which pocket and channel the subsoil of this farm, we found free water in the awful heat and drouth of last July—this, too, on land with a good surface slope. What must be the condition of such soil in a wet season? There is no economy in putting a lot of expensive fertilizers, whether barnyard or commercial, into waterlogged soil with a cold bottom. Drainage is the beginning and about one-half the remainder of good farming. How often we see a wet farm partly tiled, the worst spots being done first,

with these drained hollows ready for seeding in spring from one to three weeks earlier than what was formerly ready first! To realize full returns on draining already done, one must then go to work and tile the higher land, which now delays the seeding and interferes with the working of the partly-tiled field. While freely granting the general economy of draining worst places first, we believe one should plan his system so as to permit the subsequent tiling of the high lands without much extra labor or expense. To this end, we would strongly counsel the employment of the drainage experts sent out from the Ontario Agricultural College, Guelph, and Macdonald College, of Quebec. First get a system and a map, then work to it as closely as conditions permit. It will not cost you over ten dollars, or thereabouts, in time and money together, and the map of your farm would be worth having, apart from drainage purposes altogether; while, in ultimate saving of tile and labor, and in the greater efficiency of the system laid according to it, the survey may easily be worth ten, twenty or a hundred times its cost. Drain, but drain systematically.

The County Farm Expert.

The County Agriculturist idea, which germinated and flowered in the Province of Ontario, has caught the popular fancy in the United States, where a scheme has been projected, with a \$1,000,000 gift from a Chicago firm, to put an expert agriculturist in each of one hundred selected counties. In time, it is hoped that the plan will be so developed as to put a specialist in every county of every State in the Union. Just as we have seen, in some Ontario counties, the project contemplates the organization of farmers' clubs, county displays of farm products, the promotion of agriculture in the schools, county committees on crop improvement and other matters, and, in short, to effect the co-operation of the commercial, agricultural and educational forces of each county. With fair prospect of becoming law, what is known as the Page-Smith Bill, is also now going through Congress, which will appropriate funds for the expense, in equal share with each respective State, the agricultural college of which will select a specially-trained agricultural expert as adviser and demonstrator in the business of farming. Whether the United States will work out as successfully the details of so gigantic a scheme, as has been done on a more modest scale in Canada, remains to be seen.

University Agricultural Training.

"The need of relating our present school system more closely to agricultural life has been brought very forcibly of late years to the attention of the Provincial (Ontario) Government, and various steps in that direction have been taken, with greater or less timidity. Now, at the suggestion of the Department of Education, and for the purpose of training High School teachers in agriculture, it is proposed by Toronto, McMaster and Queen's Universities that a special course in agriculture be introduced, the student to spend the first two years upon the regular University course, but the last two to be taken up at Guelph, after which the successful student would be able to write B. S. A. after his name, and would be competent to teach agriculture in Ontario's High Schools. The proposal is well meant, but 'The Farmer's Advocate' contends that it begins at the wrong end, and that at the most we could only hope to turn out agricultural theorists, whose practical knowledge of farming would be so limited as to give them very scanty qualifications as teachers. The editor of 'The Farmer's Advocate' urges that a practical knowledge of farming is an absolute necessity for one who would pose as an expert, and he proposes, in lieu of the new plan, that our present Agricultural College be enlarged to meet the new demand. In view of all the facts of the case, and considering that our University classes are now altogether too crowded for proper efficiency, the suggestion of 'The Farmer's Advocate' deserves the serious attention of the Government."—The Canadian Guardian.

Telephones in Canada.

Of all forms of modern mechanism, probably none has done so much to reduce physical exertion, except of the vocal cords, and expedite business, as the telephone. Comparatively, it seems but yesterday since a member of "The Farmer's Advocate" staff was talking, some 35 years or more ago, over the first telephone put in operation by Prof. A. G. Bell between some place in Brantford and his adjacent country home, but now the world is wired thickly with local and long-distance lines. Naturally, a live country like Canada, which gave practical birth to this new form of human communication, has very widely developed its use. In this connection, it is interesting to note the appearance of the first report from J. L. Payne, Comptroller of Statistics in the Department of Railways, Ottawa, on the telephone interests of Canada. Owing to obvious difficulties in the collection of information for an initial report, it does not profess to be as complete and useful as it will be made in future years. A good many of the smaller companies failed to report, and in other cases statements were incomplete. In all, however, returns were received from 537 organizations, classified as follows: Government, 3 (Alberta, Saskatchewan and Manitoba); municipal, 25; stock, 308; co-operative, 101; partnership, 18; and private, 82. In the Western Provinces the separate organizations are gradually being merged under Government control. A large number of the joint-stock organizations are classified as "rural," and their capitalization is usually small, and operating expenses light. They have had their development within the past ten years, and have multiplied with great rapidity. The capital liability reported amounted to \$21,527,374.55 in stocks, and \$18,516,607.74 in funded debt; total, \$40,043,982.29. Of this, \$18,981,630.37 is credited to the Province of Quebec, but this large amount includes the Bell Telephone Company, which has its headquarters in Montreal. The gross earnings reported amounted to \$10,068,220.63, and the operating expenses to \$6,979,045.06; the net earnings, without taking into account proper deductions for interest on bond liability, taxes, etc., \$3,089,174.97. The gross earnings were equal to \$33.25 per telephone, or \$14.64 per mile of wire, and the operating expenses \$23.05 per 'phone, or \$10.15 per mile of wire. The equipment of telephone companies in 1911 was represented by 302,759 telephones, the urban mileage being over five times that of the rural. In the latter respect Ontario ranks highest, with a mileage of 29,098. Of the 'phones, 174,994 were operated by central energy, properly described as automatic, and 127,765 by magneto, operated by turning a little handle at the right. The total number of employees were reported at 10,425, to whom was paid \$915,636.14, or only 13.1 per cent. of the operating expenses.

HORSES.

A small grass field near the stables is a handy place in which to pasture the work horses. It saves time.

Be careful of the young foal after the heavy rains that he doesn't contract a cold from lying on the damp ground. Colds bring on scours, often fatal.

Do not fail to return regularly to the stallion all mares that are being bred. This is where many make a failure of horse-breeding—a failure which is often wrongly blamed to the mares or stallions.

Fed alfalfa in reasonable rations of from ten to twenty pounds a day, livery horses may be kept in vigorous thrift with a small additional quantity of grain, and thus a saving be made of twenty to thirty per cent. in cost of maintenance. In the alfalfa districts there may be found many liverymen who, having had experience with alfalfa hay, feed their horses little of anything else. In the last few years there has been a growing demand for alfalfa hay for southern towns and cities.—From Coburn's "The Book of Alfalfa."

Grass for the Horses.

Of all the farm animals, none enjoy a bite of young grass more than the horses. During the spring seeding, if stopped at the end of a field, they are quick to get a mouthful of the grass if opportunity permits. A taste of the sweet, palatable grass seems to spoil their appetite for dry feed, so that they do not relish as well during the spring months as at other seasons. Many horses are impatient of grass the year round. True, a horse on tender grass cannot do as much real work as one on dry feed, but there is no doubt better for the animal's system than a