Water Supply is All Important

Advantages of the Drilled Well—Artesian Wells of Alberta

The importance of pure water supply upon the farm or in the smaller centres of population cannot be over-estimated. Where, on the farm, a well can be dug sufficiently distant from any danger of pollution and in a location sufficiently high to overcome the possibility of surface water entering, this style of well is to be preferred to the drilled well. The occurrence of such favourable conditions, however, is so unusual as to necessitate the almost general use of drilled wells. The latter, as a rule, are more easily put down, and can be carried much deeper. They are cased with piping, and a safe joint made at the top with the pump, or in the case of a flowing well, with a faucet. This lining of the drilled well precludes the entering of any pollution, and, extending as it does for a considerable height above the surface, avoids any danger from surface water.

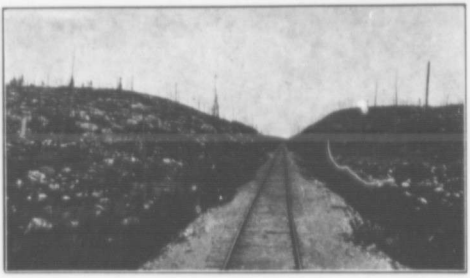
On the farm of Mr. Jos. Boisvert at Cluny, Alberta, an artesian well has recently been struck at a depth of fifty feet. Mr. Boisvert states that he drilled the well with a 1¼ inch pipe, and, with a ¾ inch faucet attached, he has secured sufficient pressure to send a stream twenty feet into the air. He also states there are quite a number of these flowing wells in his district.

Forest Reservations in United States

Good Progress Being Made in the Work of Securing Lands for the Purpose

The lands approved for acquisition by the United States government for national forest purposes in the east, since the purchase policy was inaugurated in 1910, now total 1,104,000 acres, representing a purchase price of $5,500,000. About $2,000,000 of the original appropriation remains available for further purchases in the fiscal year 1915. The lands favourably acted on to date include 133,000 acres in the White mountains of New Hampshire, while 971,000 acres are located in various parts of the southern Appalachians, from Virginia to Georgia. Nearly 400,000 acres were approved for purchase during the past year, at an average price of $4.96 per acre.

The first object of administration is to protect the forest against fire, for the twofold purpose of steadying stream-flow and increasing timber production. There is, however, provision for all forms of use of the forests not detrimental to their permanent value as sources of timber and water supplies.



Cut No. 70 **The Effect of Repeated Forest Fires**

Merchantable timber and young growth utterly destroyed. No seed trees left to establish a new forest. The fertile upper layer of soil consumed, followed by erosion of the mineral soil. A barren desert. Typical of large areas in eastern Canada.

Cut-over Timber Areas Unprotected

The Young Growth should be Cared for in the Interests of the Future—Revenues will suffer

Thousands of square miles of non-agricultural lands in eastern Canada, suitable only for timber production, have been so completely devastated by repeated fires that the forest growth has been utterly destroyed. Almost everywhere, the efforts at forest fire protection are concentrated upon the remaining areas of merchantable timber, while the cut-over lands are, for the most part, neglected. As a natural result, the future forest revenues of the several provinces are seriously jeopardized, since it is inevitable that the financial returns from the cutting of virgin timber must decrease through the gradual exhaustion of these supplies, leaving the balance to be secured from operations on lands previously cut over. Not only will there be loss in prospective stumpage dues but in ground rent also. Lumbermen are not so devoid of business judgment as to continue paying ground rent, after the removal of the virgin crop, upon lands so completely ruined by fire that there is no young growth left to assure a future profit through retention of the limits. As a matter of fact, the tendency toward the abandonment of cut-over timber limits is almost universal in some sections and will certainly continue and increase unless fires are kept out.

Repeated forest fires not only destroy the young growth, but the seed trees as well, thus preventing the reproduction of the more valuable species. Soil fertility is decreased through the destruction of the humus, and erosion is frequently so extensive that the bare rock is exposed. Such areas become deserts, for all practical purposes, instead of constituting, as they might and should, permanent sources of raw material for industry and of revenue for the provinces.—*C. L.*

Electric Power On the Farm

Its More General Use Must be Promoted by Power Distributors

Electricity as a farm power is rather an experiment as yet. The Hydro-Electric Power Commission of Ontario has done much pioneer work and has indicated the possibilities of electricity on the farm ut important experimental and demonstration work. At the present time, the Commission is doing its utmost to teach farmers the importance and value of efficient electric power applied to labour-saving devices. The actual use of power on the farms of Ontario is restricted, however, to twelve townships in the south-western portion of the province.

The Electric Power Company is operating in the Trent valley and along lake Ontario, a country well adapted for rural work. This company, which first engaged in the enterprise about four years ago, has succeeded in building up a load showing good returns.

In Wisconsin, the St. Paul Southern Electric Railway Company is planning to dispose of some of its surplus power to farmers located along its lines.

As a rule, however, this form of power is not easily available for farmers. Owners of central generating stations have heretofore been somewhat averse to engaging in the business, owing to the initial cost of constructing lines through the country districts. Fortunately, this aversion is steadily disappearing, and power owners are coming to realize more and more that rural business pays. The amount of business can be increased by encouraging the farmers to utilize electricity for work which has hitherto been done by more primitive forms of power or by hand. In this way, a summer daylight load should be built up readily.

However, the only way for power owners to satisfy themselves as to what can be done in the way of disposing of power on farms at a profit, is to dispose of it on a demonstration basis at first.—*L. G. D.*

Our Annual Fire Loss

Each Year Shows a Large Increase—Responsibility must be Placed and Punishment Provided to Curtail Number

Canada as a young nation has many things to be proud of, many things to regret, and some things which should be a disgrace to any country. One of the latter consists of our enormous fire waste. In the year 1913, Canada suffered a financial loss of approximately twenty-six million dollars by fire, and this amount represents only the loss by the destruction of buildings. To this should be added the actual money loss caused by interference with the continuity of business, the losses to public utility companies, in wires, meters, telephones, etc., and also that of the municipal corporation in requiring the use of expensive fire fighting equipment.

How long shall we allow this disgrace to continue? When a forest fire consumes a large tract of our best merchantable timber we sit back and expect nature to replace the loss. When we, through utter carelessness, burn up that which the energy of man has produced, we simply ask the question: "Was it insured?" We forget that we are, indirectly, paying the insurance. The company which has carried the policy occupies the position of the middleman, collects the premiums and pays the losses, collecting in addition whatever amount is required to cover the expenses of conducting the business and paying dividends.

The man who through carelessness takes the life of another is guilty of manslaughter. The man who through carelessness destroys by fire either his own property or that of another is equally guilty of incendiarism, if not in the eyes of the law as at present construed, at least in the opinion of his fellowmen.

When governments can be induced to appoint fire marshals, with power, after investigation, to place the responsibility where it properly belongs, and when punishment is meted out accordingly, then may we look for an improvement in our conditions. Our fire losses for the past three years have been as follows:

	Fire Losses	Deaths due to fires
1911.....	$21,459,575	317
1912.....	22,900,712	269
1913.....	26,346,618	230

With an increase of approximately three and a half million dollars in fire losses in 1913 over 1912, what may we expect in the year 1914? Will it be a still further increase, or will Canadians by the exercise of individual care show an appreciable reduction in this heavy drain upon their resources?