

Causes of and Remedies for Property Loss From Fire

Experience in Other Countries Shows Insurance Rates Can be Materially Lowered

Fire losses in Canada are chiefly due to (a) individual carelessness, (b) poor structural conditions, and (c) arson. At least 70 per cent of all fires are believed to originate from one or other of the multitudinous forms of carelessness and neglect.

Fire losses can be materially reduced by attacking the problem at its source. This is proved by the freedom from fires in foreign countries and by the experience of the Mill Mutual insurance companies in Canada and the United States. By enforcing proper fire prevention and protection measures in properties, these companies have been enabled to reduce the loss ratio from 40.25 to 40.03 per \$100 of the sum insured.

As property owners are not sufficiently influenced by their own interests to use effective means to check the fire waste, legislation should be enacted and enforced with a view to controlling the physical and moral hazards which primarily cause fires. The necessity for compulsory measures is shown by the futility of the numerous other expedients that have been tried.

Form of Legislation Needed

Existing conditions in Canada point to the need of legislation to especially deal with the following points:

1. The proper planning and laying out of cities and towns with a view to restricting industrial occupancies and hazardous pursuits to properly delimited areas.
2. Provision in every community of an adequate water supply and fire-fighting facilities proportionate to its character, area and population.
3. Minimum building requirements designed to give reasonable safety of life and property outside the limits of the larger municipalities where building ordinances are already in force.
4. Control of hazards attending the occupancy of buildings by requirements suppressing dangerous nuisances, such as the storage of explosives, combustibles, rubbish and ashes. All buildings to be systematically inspected to ensure the enforcement of rules for cleanliness and good housekeeping.
5. A fire marshal law in each province, providing for official investigation of the causes of all fires, with the object of suppressing incendiarism.
6. Enforcement of personal liability with heavy penalties in all cases where fire is occasioned by a breach of fire-prevention laws.

SETTLERS' PERMITS ON PRAIRIES

The permit system of regulating settlers' clearing fires has been instituted on Dominion lands in Manitoba and Saskatchewan. The administration, by special arrangement, is carried out by provincial officials.

Penny Wise, Pound Foolish

The operator of a coal mine on Dominion lands who looks to the future and mines his coal in a systematic manner carries on his operations at a higher cost than the one who takes the easiest available coal first, wasting that which is more costly to mine. This is true because a lease is granted to anyone desiring it and also because of the wide distribution of coal.

For instance, in a certain mine, owing to a great demand for coal, the directors instructed the mine-manager to produce an output greater than the development work justified. The mine-manager was forced, against his better judgment, to obtain the coal wherever he could. Some pillars were extracted and others were reduced to such dimension that they were not able to bear the weight of the superincumbent strata. As a result, there was

be achieved are well known and thoroughly understood. So far we have not been able to overcome official inertia and lack of appreciation of the necessities of the case.—*Sir Clifford Sifton, before Ninth Annual Meeting of Commission of Conservation.*

HAMMER AWAY AT FIRE LOSSES

It has been conclusively shown by the experience of England and other European countries that proper measures of fire prevention have immediately beneficial effects, but in Canada we have not taken any such steps. Losses do not diminish. They increase. During the four years from 1912 to 1915, the average fire loss was \$21,250,000 per annum. In 1916, the loss was \$25,400,000. The 1916 figure will be exceeded during the present year.

Fires are not gaining in frequency. The increased destruction is due to appreciation in values and to extensive fires. As an indication of the difference which

DRIVING HOME THE MEANING OF FIRE LOSS

CANADA'S fire loss in 1916, was \$25,400,000, and it will be greater this year. So vast is the amount that it is hard to realize its significance when stated in mere figures. Here are some other ways of stating it, which drive home its baleful significance:

The Canadian Government pays \$2,000,000 a month in separation allowances to soldiers' wives and dependents. The Canadian people burn property valued at \$2,250,000 a month.

Canada's annual fire waste is sufficient to pay 2 per cent interest on all the war loans floated in Canada and provide a sinking fund large enough to cancel the total indebtedness in 30 years.

One year's fire loss in Canada would purchase 12,000,000 bushels of wheat for our allies.

The value of grain and other agricultural produce burned in Canada in 1916 was equal to the average annual production of 1,500 hundred-acre farms.

Canada's fire loss in 1916 would have provided 3,500 aeroplanes or 25,000 machine guns or maintained over 20,000 men in the trenches for a year.

We have talked about the immensity of our fire losses for years. Isn't it time that laws were passed to reduce the waste? It can be done.

a "squeeze", the mine was badly wrecked and much coal has been lost.

It is time that the Dominion Government inserted provisions in its coal leases compelling economical mining. All other important coal-mining countries which dispose of coal-mining rights under a system of leasehold have found it necessary to prevent waste arising from the lessee sacrificing the public wealth for his private gain and to prevent waste due to injudicious mining.

Progress and No Progress

With regard to forestry, the various organizations at work have been successful in bringing about perhaps the greatest degree of improvement that is observable in connection with any department or branch of natural resources.

In the conservation of coal, which is one of the most important subjects, we can record but little improvement, though the means of improvement and the methods by which improvements can

exists in countries where proper precautions are taken, the total loss by fire in the whole of the United Kingdom, apart from fires caused by the enemy, amounted from August, 1914, to December, 1916, to \$41,000,295. During the same period, losses in Canada, exclusive of forest fires, amounted to \$52,027,000. These figures disclose a situation which calls for active and vigorous measures of prevention, and we shall continue to call attention to them until some steps are taken to apply a remedy.—*Sir Clifford Sifton, before Ninth Annual Meeting of Commission of Conservation.*

A COSTLY CURE

Four thousand two hundred men are employed by Canadian municipalities in waiting for fires to occur and then attempting to extinguish them. The cost of this service exceeds \$4,000,000 a year. This energy would be better employed if devoted to removing fire-breeding conditions and to enforcing proper regulations to prevent the occurrence of fires.

Will Soon Need All Power St. Lawrence Can Produce

Sir Clifford Sifton Takes Strong Stand on Export of Power

Twelve or fifteen years ago, it was not thought that the Hydro-Electric Power Commission could make use of 10,000 h.p., and accordingly, permits to export were more or less freely given. There is now, in round figures, an immediate demand for 300,000 h.p., and the demand cannot be satisfied.

A situation analogous to that in which Niagara power stood fifteen years ago now exists on the St. Lawrence river. A very large capacity for the development of power exists upon the St. Lawrence. There is a considerable development in the neighbourhood of Montreal, but the greater portion of the power still remains undeveloped. Attempts are constantly being made to fatally complicate the position with respect to St. Lawrence power by securing the privilege of private development which will be followed by contracts for the exportation of the power developed. I understand that the Cedar Rapids company exports something like 60,000 horse-power per annum.

An attempt was made some years ago to secure the privilege of developing the Long Sault power, the purpose being to export the greater portion of the power in the interest of a manufacturing corporation on the American side of the line. This project was defeated, largely through our efforts. A similar project is now being promoted, and we are resisting it with all our energy, and we trust with fair prospects of success. It is almost incredible that any responsible man should be so shortsighted as to favour this project in the face of the experience which we are now undergoing at Niagara. Within a very few years there will be a demand for every horse-power that can be developed on the St. Lawrence river to which Canada is entitled for use upon the Canadian side.—*Sir Clifford Sifton, before Ninth Annual Meeting of the Commission of Conservation.*

GETTING THE MOST OUT OF COAL IN BY-PRODUCTS

The by-products obtainable from coal are numerous and important, and the best authorities contend that it is unwise to burn it in the ordinary way. When burned under boilers to produce power, less than 15 per cent of the heat units in the coal is utilized. By low carbonization, the valuable light and heavy oils are obtained, the gas can be used to generate power and the residuum coke containing nearly all the original fixed carbon can be burned in the ordinary way to produce heat and power.

WEST NEEDS MORE RESERVES

Further extensions of the areas set apart in Western Canada as forest reserves are much to be desired. No such reserves have been made since 1913, though very considerable areas have been found upon examination to be chiefly valuable for forest purposes.