

Canada's Fire Losses

More Stringent Building Laws, And Closer Inspection Required.

During 1914 Canada's total of fire losses showed a considerable reduction over 1913; yet it was in excess of that of 1912.

From an analysis of the causes of fires for 1914 some encouragement may be obtained in the belief that progress is being made in education along fire prevention lines. Carelessness has always been a prolific cause of fire loss, and a reduction of fires attributable to this cause from 183 in 1913 to 127 in 1914 is appreciated. Attention must still be directed, however, to the 30 losses caused by cigarette smoking and cigar and cigarette stubs carelessly thrown away.

One feature of the year's fire record which requires immediate attention is the large increase in the number of apartment house fires. No doubt part of this increase may be attributed to the proportionate growth in the number of apartment blocks being erected, but there is a serious danger arising in our cities from the number of one-family houses or old buildings which are being converted into apartment blocks, without corresponding protection from fire or of the lives of the inmates from fire danger. Stringent building laws should be provided covering this transformation process, and thorough inspection should be insisted upon both during the progress of reconstruction and at least annually by both the municipality and the insurance companies interested.

Too little attention is paid to the matter of building inspection, with the result that overheated pipes and heating apparatus is a common cause of fires. With proper inspection this could not be, as legal power is given to prosecute for maintaining dangerous fire conditions and all insurance policies are based upon the safe condition of heating and lighting equipment. It is a question whether fire insurance companies are not making it too easy for applicants to obtain insurance, and whether, as in the case of life insurance companies, thorough examination of the risk involved and the remedying of any dangerous or abnormal fire conditions should not be insisted upon before a fire insurance policy could be legally issued.

More attention should also be paid to the interior construction and heating of residential buildings. During 1914, no less than 750 dwellings were destroyed by fire, and of these a large proportion through forcing of the heating equipment.

During January 1915, no less than 66 fires were reported as caused by defective heating apparatus, 11 by defective wiring, and 19 from carelessness with matches.

The Value of Wood Waste

Experiments as to its Use in the Production of Ethyl Alcohol

The value of most of the wood waste produced to-day is limited to its fuel value for the production of power at the mill. In some cases, methods of closer utilization have been worked out, but, compared with the total amount of wood waste produced, the amount of material so utilized is almost negligible. Furthermore, most of the large lumber mills produce waste greatly in excess of the amount necessary for power production and the waste burners are still in use, involving not only a loss of large amounts of wood, but also a definite, fixed charge to get

Flowers and Weeds

Uncontrolled Flowers May Often Become Bad Weeds

The propagation of weeds has at times been encouraged under the guise of the planting of a beautiful flower. Instances of this are not rare in Canada, and among those may be mentioned that of the Kochia, or Burning Bush, an illustration of which appears herewith. This is an ornamental annual, of rapid growth to three feet high. The leaves are slender and of light green colour, changing in September to a deep red. The flowers are small but innumerable, and the seed proportionately plentiful.

The plant, if allowed to ripen, drops its seed very readily, and,

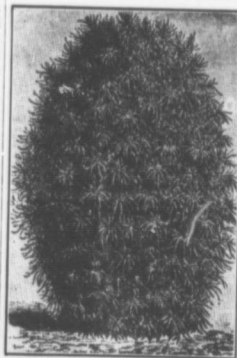
MORE THAN USUAL

The call is for more food What we want to understand is that it is millions of bushels, not millions of acres, that are called for; more milk and butter and cheese, rather than more cows. It is a day when the economized use of labor will tell Let us remember that it is more bushels per acre, more pounds of milk per cow, more pounds of meat per animal that will count, and that will mean more food per farm. Let us in 1915 make good on the farmer's fighting line with "MORE THAN USUAL."—C. C. James, at the 1915 Annual Meeting of the Commission of Conservation.

rid of it. It has been possible in the past to utilize only a small percentage of this material, but the problem is being attacked from a number of different angles and there is reason to believe that, within a short time, a much larger percentage of such material can be utilized at a profit. Laboratory experiments are being conducted by the United States Forest Products Laboratory, looking toward the commercial production of ethyl alcohol from the distillation of sawdust, shavings, edgings, etc.

A study of the motor fuel problem will show that the production of mineral fuels, such as gasoline, motor spirit, etc., is not keeping pace with automobile production. Alcohol appears to be the only solution of the problem, for, if it can be produced from wood waste at a reasonable figure, a tremendous supply of raw material is available from a natural, growing raw material which is not a food-stuff.

If the experiments now under way should demonstrate that the processes found practicable on a laboratory basis can be made commercially practicable as well, the result will be a tremendous advance in the practical utilization of forest products.—C.L.



Cut No. 88 Kochia or Burning Bush

wherever a seed drops, a plant will grow the following season. It has been largely used as a border plant along roadways and drives, and is sold by the seedsmen for this purpose. On account of its rapid spreading, the planting of Kochia should be discontinued and seedsmen would be well advised if they refrained from further selling it.

TAR SANDS OF ALBERTA

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the pavement will be laid next summer.

The City Commissioner states that: "if this work is successfully carried out it will be of greater value to the city of Edmonton and Alberta generally than the bringing in of half a dozen industries at the present time, we are absolutely suffering for the lack of cheap pavement and for the lack of good road material, whereby the farmers may haul their products to the city on well built roads. The solution of this problem will be worth millions of dollars"

At present, all asphaltic paving materials used in Canada are imported from foreign countries. In 1913-14 the value of these imports reached a total of nearly \$900,000 and the consumption is rapidly increasing. The value of a cheap and satisfactory paving material in Western Canada would be very great.

The bituminous sands may also serve as a source of pure bitumen, which may be extracted either by distillation of carbon, the lighter petroleum distillates, or by the use of hot water and steam. Among the many uses to which this extracted bitumen may be applied may be mentioned: floorings for many classes of buildings—such as mills, hospitals, schools, skating rinks—for foundations which require to absorb vibration and jars, as in electric power plants, for lining and damp courses for cellars, reservoirs, etc., for insulation of pipes, and as a source of asphaltic oils.

Attempts in this direction have been made for the past twenty years in the United States. No industry, however, has been established and no extracting plant is now in operation. The cause for the failures is not far to seek. In California extracted bitumen, at \$12.00 per ton, cannot compete with petroleum residuum at \$6.50 to \$9.00 per ton. In Alberta, however, bitumen extracted at \$12.00 would compete with imported refined asphalt, costing \$27.00 to \$34.00 per ton, delivered.

Before such an industry, however is attempted, all available information of the results of many years' serious and often costly experimentation in the United States should be consulted.—Dr. Haanel, at the Annual Meeting of the Commission of Conservation.

The workingman's wife can keep her husband on the pay-roll by buying goods made in Canada.

While the Canadian contingent is doing its part at the front and the Canadian business man is doing his part at home, it remains for the Canadian citizen also to do his part. It is patriotic and it is good business to buy goods, first, that are made in our own town, second, in our own country, and third, in our own British Empire.