

Conservation

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Exterminate the House-fly

Attack Filthy, Disease-carrying
Fest in its Breeding-grounds.
Campaign for a Clean City

The house-fly is the dirtiest of all vermin. It visits the filthiest places imaginable and then distributes the filth over our food. It carries the germs of typhoid, infantile diarrhoea, and other intestinal diseases, and, probably, assists in the spread of tuberculosis.

Hence, it is not merely very dirty but exceedingly dangerous as well. Means of protection against flies are common; doors and windows may be screened, fly papers, traps, 'swatters', and poison may be employed to kill those that do enter the house. But these purely defensive measures are not enough. The war must be carried into the enemy's country; the fly must be exterminated.

To wage war with the adult fly is to go into a ceaseless battle that can never be decisive in man's favour. The flies form such a numerous host that it is impossible to kill them all in a single season and a very few survivors are sufficient to propagate an equally numerous host the season following.

The only way to exterminate the fly is to attack it in the larval or maggot form. Flies lay their eggs in manure or garbage; ten days from the time of hatching the maggots emerge as winged insects, fully equipped for distributing disease-breeding bacteria. But a city with clean backyards and clean stable premises would be a flyless city, for it would have abolished the flies' breeding-grounds. The plan of campaign against these annoying and dangerous pests is thus plain: we must clean up, not once or twice a year, but all the time. City by-laws should require all owners of stables to keep manure in a fly-tight, covered box and to have it removed at least twice a week. A similar law should apply to the disposal of garbage. Persons with dirty back-yards should be prosecuted.

Privies should be ashed wherever possible and, where allowed, should be kept continually disinfected and be cleaned twice weekly. The piling of refuse in disgusting and unsight-

Municipal Sanitation

Proper Facilities for Destruction of
Refuse Should be Provided

A garbage 'dump' is a disgrace to any city or town. Of what advantage is it to remove the numerous private rubbish-heaps to build a gigantic communal rubbish-heap? Is the unsightliness or the dangerous filthiness in any wise reduced by piling all the refuse into one vast, festering, disease-breeding mass? It may be some advantage to those parts of the town remote from the dump, but only at the expense of some other portion of the city and it is grossly unfair. No true citizen from a high-class residential district could feel satisfied if the cleanliness of his particular portion of the town were achieved by the utter spoiling of some other portion. Any man who is proud of his city would feel as much shame that there should be a filthy civic backyard as that his own backyard should be dirty. The only satisfactory method of removing refuse is to burn it in an incinerator or, failing that, to have it buried.

ly "dumps" should never be permitted. If the town cannot afford an incinerator, the refuse should be buried.

Experiments conducted by the U.S. Dept. of Agriculture have shown that the fly larvae in manure and other refuse may be killed by treatment with borax, one pound of borax being sufficient to treat 16 cu. ft. or very nearly 13 bushels of manure. If used in larger quantities, the borax may prove injurious to plants. The borax should be sifted over the manure, particularly near the edges of the pile, which should then be sprinkled with four gallons of water. This treatment will kill 98 to 99 per cent of all the larvae in the manure. At 11 cents per pound for borax, it is estimated that the cost would be 2 cents per horse per day. This cost could be very greatly reduced by employing calcined colemanite instead of borax, if the former were imported in large quantities. One pound of colemanite will treat 11 bushels of manure and its larvicidal action is as effective as that of borax.

Weeds on City Lots

Drastic Action Demanded to
Eliminate this Menace to
Agriculture

At the last annual meeting of the Commission of Conservation special stress was laid upon the increasing prevalence of weeds. Earnest pleas were made for action to overcome this detriment to agriculture.

While farming interests are exerting themselves to eliminate this serious handicap, they have just cause to complain of the prevalence of weeds on city lots and subdivided land upon the outskirts of cities and towns. This land, once farming some of the best farms, offers ideal conditions for the growth of weeds, and they flourish in great luxuriance. The owners in many cases are non-residents, and, consequently, do not appreciate the condition of their property.

Municipal officers and roadmasters should be given the authority, and be compelled, to have weeds cut upon vacant property, the cost of doing the work to become a legal charge against the land. The majority of owners would be willing to pay the cost of weed cutting, and would appreciate the service. It is hoped that action will be taken, so that vacant urban property may no longer be regarded as a dangerous weed menace.

CANADIAN TIMBER VALUES

According to a recent Commerce Report the values of the various classes of timber produced in Canada in 1914, together with the values of the forest products, total \$176,672,000, being divided as follows: Lumber, lath and shingles, \$67,500,000; fire wood, \$60,500,000; pulpwood, \$15,500,000; posts and rails, \$9,500,000; cross ties, \$9,000,000; square timber exported, \$4,000,000; coopeage, \$1,900,000; poles, \$700,000; logs exported, \$850,000; tanning material, \$22,000; round mining timbers, \$500,000; miscellaneous exports, \$300,000; miscellaneous products, \$10,000,000.

Preservation of Wood

Use of Paint or Other Protection
Greatly Increases Life

From the standpoint of the average consumer, more has been expected of wood and less done to help it serve a great variety of uses than almost any other building material. It is a comparatively modern conception that proper preservative treatment is practical and economical on the farm and around the home. Good paint is a good friend of lumber, and, while not usually considered in that light, is the one protection against the natural progress of decay which has been universally used. Yet the well painted house has unprotected floor beams in moist walls, door steps on wet ground, and many inside surfaces and timbers which are continually exposed to conditions favorable to decay. The wonderful service which wood has given during all the years, with little or no consideration of the factors which destroy, brings into greater prominence the possibilities of preservative treatment under the present day desire for permanence and elimination of waste. No one expects unprotected steel to do anything but rust, concrete is waterproofed and its surface protected from abrasion and disintegration, fabrics are shielded from the elements, white wood has largely been left to shift for itself. The application of wood preserving methods to the every day uses of lumber, where it needs protection from decay, is in keeping with modern ideas.—

sterling.

FOREST PROTECTION

The state of Maine makes an annual appropriation of \$71,400 for forestry work. Of this, \$69,400 is expended on fire protection, \$1,000 on nurseries and reforestation work, and the balance on investigations and publications. In Massachusetts, the annual forestry appropriation is \$83,000, of which \$33,000 is for fire protection, \$10,000 for nurseries and reforestation work, and \$20,000 for the purchase and maintenance of state forests. The remainder, \$20,000, is expended for administration, publications and investigation.

Increasing the Flax Output

Care in the Field and Mill, Together with Proper Grading Ensure Greater Profits

In a recent article in the *Scientific American*, Mr. J. A. McCracken refers to the abnormal prices that have been obtained for flax fibre since and as a result of the war. The writer offers several valuable suggestions to assist flax mill operators to increase the efficiency of their plants and to secure the full advantage of the present high prices. Ordinarily there is a very wide range in the prices received for flax fibre; varying skill and attention create a difference of from \$200 to \$500 per ton in final returns. Given efficient labour, only minor factors and small outlays are involved in producing fibre that will command the highest market price.

Timely and careful harvesting is the prime factor. By setting pullers to work before the customary time, the danger of labour shortage is minimized and the enormous gain in the quality and yield of the fibre, in the fields that are harvested last, much more than offsets the loss in the yield of seed. The late harvester finds his last fields in the process of deseeding and in second green before their turn comes to be harvested. Grading should be commenced in harvest by paying pullers extra to make two or more separate lots, according to quality. An expenditure of 50 cents per acre for this purpose is a profitable investment.

The system of retting is of very great importance. Irish and Canadian flax, as grown, differ little in quality but the former is water-retted while the latter, except for one departure to date, is dew-retted. The chief advantage of water-retted over dew-retted fibre is one of uniformity. In dew-retting, also, the operator is practically at the mercy of the weather. The respective merits of the two systems are indicated by the fact that water-retted Irish flax brings 36 to 43 cents per pound, and Canadian dew-retted flax from 16 to 25 cents.

The only Canadian water-retted flax, produced by Howard Fraleigh at Forest, Ont., sold for 45 cents per pound on the New England market. This product did not receive the complete advantages of water-retting but only those of mixed retting, being treated half-way in tanks and the balance of the process on the grass as in dew-retting. Immediately after pulling, the flax was placed in two concrete tanks, each 25 feet long, 15 feet wide and 4 feet deep, and the mass weighted to prevent the straw from rising. In ordinary July and August weather four or five days is usually sufficient to dissolve the adhering gums so

that the fibre can be extracted. When the retting operation is about half finished the water is drained off and the flax carefully transported to an adjoining meadow and spread evenly in rows as for dew-retting. The additional time required varies according to the condition of the flax and the state of the weather. In the case of the 45-cent fibre produced by Howard Fraleigh, however, the straw had practically completed retting in the tank.

In actual practice the removal of the fibre from the encumbering woody chive has most bearing on the final returns. Proper scutching, which depends essentially upon efficient labour, produces a high percentage of first quality fibre. In a mill with a trained scutching force, the two average about ten per cent, whereas, in a mis-governed plant, it may run as high as thirty per cent. As the prices obtained for tow products are extremely low as compared with those for dressed fibre, every effort should be made by preliminary grading, proper retting and efficient scutching to reduce the percentage of tow; flaxes of various qualities should be distributed in respective grades. The skillful grader at the Forest mill makes half a dozen lots which are baled separately for shipment. Grading increases the returns by between 15 and 20 per cent.

DISTILLATION AND BRIQUETTING OF LIGNITE

Manitoba, Saskatchewan and Alberta contain many millions of tons of sub-bituminous coal and lignite but the comparatively low heating value of this coal and the fact that it disintegrates rapidly when exposed to the air prevent its economical transportation for any considerable distance. In fact, these provinces are now supplied almost entirely by coal from the Crownsnest district in Alberta and British Columbia and from United States.

In a plant in Denver, Colorado, with a capacity of 500 tons of lignite per day, lignite is distilled, the by-products are saved and the residue is manufactured into briquettes. These briquettes are of very good quality, and are suitable for domestic or railway locomotive purposes.

The lignite is charged into ovens having a capacity of 10 tons each. The ovens are heated by gas flame between the walls, and distillation is carried on for about two hours without the admission of oxygen from the atmosphere. During distillation about 100,000 cu. ft. of gas, 130 gals. of tar and 25 lbs. of ammonium sulphate, are removed per 10 tons of lignite. Benzol is removed from the gas and the gas is cleaned by electrical precipitation.

While the raw lignite only contains 55 per cent of fixed carbon, the briquettes average 84 per cent.—W.J.D.

Wide Use of Electricity

New Appliances Increase Adaptability for Domestic Purposes

The use of electricity in the home is gradually developing. Its original limited utility as a source of light has been extended to the supplying of energy for the electric iron and toaster, the sewing and washing machines and the vacuum cleaner. Electric ranges are coming into general use. The first objection, the relatively high initial cost of the range, having been overcome.

A domestic use to which electricity seems admirably adapted but which, thus far, has received insufficient attention is that of providing hot water. In many Canadian homes, the furnaces or coal ranges are provided with attachments to supply hot water for the kitchen, bath-room and laundry during the winter months. As the furnace remains unused from the middle of spring and coal ranges are not regularly used during summer, the supply of hot water throughout the house is lacking in quantity. Supplying this service by electricity is a great convenience to the householder, and, at the same time, opens a new field for the desired summer load to the central station or other organization dealing in electric energy.

Several central stations, aware of the benefits to be derived from such a load, have introduced special systems of charging for this service. In Toronto, one organization has an arrangement with one small (500 watts) and one large (2,000 watts) heating unit; the idea is to charge for the small unit on a moderate flat-rate basis and keep it operating constantly for ordinary domestic needs, while the large unit, which need be used only for abnormal requirements, such as laundering, is charged for at a low meter rate. The cost of the installation, including jacketed tank, plumbing, etc., is \$50.00. In the United States units of 750 and 1,000 watts have been found satisfactory. Many companies do not meter the consumption of the hot-water heater, charging a monthly flat-rate for this service. These companies have also been encouraging the "cooking-by-wire" movement; usually, it is stipulated that water-heater and range are to be served through the same double-way switch so that both the range and the heater are not operated at the same time. The water heater is usually kept on continually except when using the range; thus, the boiler is heated over night and, if properly jacketed with non-conducting material, remains hot enough through the day to supply the demand while the range is in service.—L.G.D.

Pruning of Trees

Useful Suggestions for This Necessary Treatment

Always use a pole saw and pole shears on the tips of long branches, and use the pole hook in removing dead branches of the alantinus and other brittle trees where it would be too dangerous to reach them otherwise.

Do not "head back" or cut off the top of a tree except where the tree is old and failing, and then under special instructions.

Be as sparing and as judicious in pruning as possible, and do not make the branches so high as to raise the tree look like a telegraph pole.

Commence pruning the tree from the top and finish at the bottom.

Make every cut as close and parallel to the trunk as possible.

To make the cut perfectly smooth the saw must be well set and sharp.

Leave no stubs, dead and dying wood, or fungus-covered branches behind you.

Do not fail to cover every wound with coal tar, not allowing it needlessly to run down the trunk.

Do not remove several large branches on one tree at a time. They must be removed gradually, the work extending over several seasons.

Prevent tearing the bark off the trunk in removing large limbs by first making an "undercut."

Make the cuts on a slant. Some trees, like the elm, sycamore, linden and willow will stand the process of heading back more than others, and the poplar is a tree that must be cut back every few years to keep its crown from becoming too tall and unsafe.

When shortening a branch, leave a few twigs at the end to draw the sap to the freshly cut wound and thus enable the growing layer under the bark to heal it over.

In trimming small branches or shoots, the cut must be made just above a bud.

When several branches come out from the trunk in a whorl, they should not all be cut away at the same time lest the tree be girdled. This arrangement of branches occurs most frequently in the coniferous trees.—*American Forestry*

TOWN PLANNING APPROVED

The National Fire Protection Association, at its convention in Chicago on May 9-10, made the following recommendation: "The association heartily commends the growing movement for city planning, as likely to produce better conditions as to building heights and congested areas and provide the open spaces and broad avenues, which, besides their human and aesthetic values, are excellent checks to sweeping fires."

Commission of Conservation

CANADA

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CONSERVATION is published the first of each month. Its object is the dissemination of information relative to the natural resources of Canada, their development and the proper conservation of the same, together with timely articles covering town-planning and public health.

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OTTAWA, JUNE 1916

Berry Pickers Cause Fires

Carelessness with Fire Results in Destruction of Forest Resources

Many causes are responsible for Canada's heavy forest fire losses. Some of the erstwhile greatest offenders have come to realize the destruction which their negligence was causing and have adopted systematic measures to overcome the loss.

Several causes of forest fires have not, however, received sufficient attention. Dr. C. D. Howe, in *Forest Protection in Canada, 1915-1914*, states that in the settled areas, one of the chief classes of persons responsible for fires are berry-pickers. Smouldering camp fires, or sparks caused by smoking, fall into dry grass or brush, starting small fires; fanned by a high wind the fires rapidly become uncontrollable, spreading from the berry patches to the larger timber.

With the berry season at hand, it should surely be necessary only to draw the attention of berry-pickers to the destruction which their carelessness or indifference is causing to secure an immediate reduction in the number of forest fires for which they are directly or indirectly responsible.

A campaign is being inaugurated in Toronto to eliminate unnecessary noises. Other municipalities could with advantage undertake the same improvement.

Don't wait until the inspector of the Health Department orders you to clean up your premises. Start early, and be classed among the cleanest in the neighborhood.

Backed His Waggon on Shade Tree

Magistrate Heavily Fines Offender, and Recognizes Municipal Grievance

"A teamster was arraigned in police court this morning, charged with willfully damaging a city shade tree on Dalhousie Street by backing his waggon against it. It was one of the first offences of this kind which has been brought to the notice of the police, and Magistrate Askwith, deciding that an example should be made of the offender, sentenced him to pay a fine of \$5 and 82 costs, with the alternative of serving one week in jail."

The foregoing report from the *Ottawa Free Press* of May 12, demonstrates that a new interest is being taken in city shade trees. In every city trees have been damaged by drivers tying horses to them and allowing them to bite the bark. Electric wire men also cause much destruction of shade trees. Interference with the stringing of wires is the only excuse for lopping off large branches, thus disfiguring, and, in many instances, killing, the trees.

City authorities are responsible also for the loss of many beautiful shade trees. They construct sidewalks regardless of whether a valuable shade tree is crowded at the roots by concrete. The trees are thus stunted in their growth and are deformed.

Several of our more progressive cities have already appointed tree experts to care for municipal shade trees. Appreciation of their value as a civic attraction is becoming more general. A few examples of the offenders being punished, as in the foregoing case, will have a wholesome effect upon those who, either maliciously or carelessly, would injure the already severely handicapped city shade tree.

NEW BRUNSWICK FOREST SURVEY

Under the direction of P. Z. Caverhill, Director of Forest Survey, a beginning has been made in the survey and estimate of Crown timber lands of New Brunswick. Parties are being put in the field, and the work is to be prosecuted vigorously. A feature of the investigation will be a classification of forest and agricultural soils, with a view to determining the location and extent of areas suitable for settlement. The Commission of Conservation will co-operate with the provincial authorities in the establishment of a definite policy for the land classification work.—C.L.

Carelessness of Travellers

Prairie Fires Started Through Neglect of Ordinary Precautions

Fire Commissioner J. K. Wilson, of Saskatchewan, referring, in his report for the last quarter of 1915, to the losses by prairie fires, says:

"Much of the waste caused by the destructive prairie fire may be charged to those who, in travelling across the prairie, carelessly throw away a lighted match, cigar or cigarette or leave a camp fire not extinguished. The careless thresher leaves live coals around his engine when closing down for the night. In the morning he finds that a high wind sprang up during the night, his threshing outfit has gone up in smoke and a disastrous prairie fire is raging. The direct result of carelessness is that hundreds of settlers are deprived of their homes and crops, while some are penniless and dependent upon the community for assistance to tide them through the winter.

"The person who starts a prairie fire through carelessness or neglect should be severely punished. Such a measure surely would educate people to be more careful.

"Personal responsibility for fires has attracted much attention, especially among those who are interested in fire prevention and protection. In some countries this principle has already been adopted in law, and the person who is responsible for the fire is held liable for the loss of the individual affected. This manner of dealing with the individual who, through his own carelessness or neglect, causes his neighbor to suffer, should be a big step toward the decrease of the enormous and avoidable fire waste."

Value of Fresh Air

One of the chief essentials to good health is a constant supply of pure and wholesome air. This is as necessary in the home as in the office or factory. The open window, the outside sleeping balcony and living in the open air, all tend to strengthen the constitution and build up the nervous system. For this reason too much attention cannot be paid to the ventilation of buildings. A supply of pure, fresh air pays from a monetary standpoint. Roughly speaking, an increase in production of ten per cent is not unusual in the average office, shop or warehouse, following the installation of a ventilating system. Fresh air, therefore, properly circulated, is an essential factor even in successful factory management.

Pavements of Wooden Blocks

Improved Methods of Treatment Give Satisfactory Results

Crossed wood block pavements are rapidly becoming recognized as the most satisfactory of all street paving material. They are noiseless, durable, sanitary, and if properly treated and laid are distinctly economical. The failures in the past which have in some cases prejudiced cities against wood blocks have been corrected, so that there is no excuse now for the existence of any wood block pavement which doesn't meet all of the modern requirements of service. The improvements in the methods of treatment and laying are largely the result of organized activity by various associations representing either the lumber interests or wood-preserving plants.—*American Forestry*.

Sea Monsters That Bring Good Prices

Growing Demand for Tuna, Swordfish and Sturgeon in United States Markets

There are some fishes which, though not always washed entirely, are by no means fully utilized. One of these is the horse-mackerel, or tuna, a huge fish which sometimes reaches a weight of two or three hundred pounds. M. Pierre Lemy, a large Parisian merchant engaged in the prepared food business, says that, after the sardine, the tuna is the fish most important as a preserved product. There is an upward tendency in the price of these fish at present in the United States market.

A few years ago, sword-fish fishery was unknown on our coasts. Now there is a special fleet of boats engaged in capturing sword-fish. Eighty of these fish were caught last year at Ingonish, C.B. They ranged from 300 to 400 pounds in weight, and one was caught at Sydney which weighed 565 pounds. At four cents a pound, such a fish would be a prize for a fisherman. In Boston or New York, the price of sword-fish to the consumer is about 25 cents per pound. Thus, this once neglected fish is now yielding ample returns.

The same thing is true of sturgeon. A generation ago sturgeon were thrown up on the beach of the St. John river for manure; now, in some cases, good lake sturgeon are worth as much as a good-sized cow. Thirty cents per pound has been recently paid for sturgeon in the New York markets, and the weight ranges from 30 to 100 pounds.

By-product Coking of Coal

Its Great Development, and its Value in Peace and War

The great development of by-product coking of coal in Germany has assured her an uninterrupted and adequate supply of modern explosives. The value of this development may be measured by the importance of munitions in deciding the outcome of the war.

In the past the whole world has been dependent upon Germany for dye-stuffs and other substances prepared from the derivatives of coal tar. Thus both in peace and war Germany possessed a great industrial advantage over other nations.

British plants are now being established to cope with the demand for picric acid and trinitro-toluene, while the United States is also profiting by the lesson learned from the war. Before the war there was but one company in the United States producing distillation products on a large scale, while the latest statistics show that over 8,000,000 tons of coal were carbonized in by-product ovens last year, yielding over 4,800,000 gallons of benzol and 1,300,000 gallons of toluol. The full annual capacity of the benzol recovery plants now in operation and in course of construction is estimated to exceed 20,000,000 gallons.

Although Canada has the third largest reserves of coal in the world, beehive coke ovens, wasting the by-products, are still used in some sections and not a single additional by-product oven has been installed since the war. The war should teach Canada the obvious lesson that, whether for war or peace, it is criminal folly to neglect the utmost utilization of those resources which are lying latent in her bounteous supplies of bituminous coal.—W. J. D.

Accumulations of empty boxes and barrels should not be permitted.

Premises should be kept free from rubbish inside and out. Rubbish heaps are dangerous.

A Danish invention, recently announced, consists of the preparation of birch whereby it can be used to replace mahogany, teak and nut-tree, possessing also the lasting qualities of these expensive woods.

School teachers should warn their pupils against rushing suddenly out into the roadway when released from school. Vehicle drivers as a rule are careful, but the pupils must also exercise caution to avoid accidents.

Daylight in Farm Buildings

One of the commonest mistakes made in planning Canadian farm buildings is the small number of windows in the stables. In the placing of the buildings, in their relation to one another or to other surroundings, care may have been taken, but in so many instances there has been an utter disregard of the proper lighting of the stables. Many fine barns and stables, well painted and of excellent outward appearance, are



Cut No. 29.

A convenient, well built barn with the most up-to-date fixtures, shut almost in darkness.



Cut No. 35.

A well light-ed, as well as well built, barn, healthy and well ventilated.

miserably lighted and are dark and gloomy within.

Prevention is better than cure, and light is the cheapest preventive measure known against disease. Dark and dingy stables are much more favourable for the development and spread of disease than a stable flooded with light. In working it is both difficult and unpleasant to grope one's way around in a stable which is dark when the sun is shining. The work can be done better, in less time and more cheerfully in a well-lighted stable than in one where at the brightest time of the day a dismal twilight reigns. For the sake of comfort and health, which means, incidentally, greater profits, let us have more light in our farm buildings.—F. C. N.

The Cost of Fires

Canada Pays Dearly for Indifference and Carelessness with Fire

The Dominion Superintendent of Insurance has issued an abstract report of fire insurance business in Canada for 1915. The report gives an interesting insight into what Canada is paying as the price of her indifference and carelessness with fire.

departments, extra water-supply, private fire protection, etc.

That much the greater portion of this loss may be avoided is shown by a report of the fire chief of Vancouver, B.C., for March, covering the causes of fires in the cases of the 36 alarms responded to by the fire department in that city, as follows: Children playing with matches, 2; lamp thrown on stove, 1; chimney fires, 9; overheated stoves and furnaces, 3; unknown origin, 5; electric heater left turned on, 1; smoke scare, 1; backfire in carburettor, 1; grease on stove, 1; defective chimney, 1; hot ashes, 2; spontaneous combustion, 1; gasoline explosion, 1; electrical origin, 2; overheated coal oil stove, 2; defective fire-place, 1; overheated chimney, 1; smoking in bed, 1.

Canada cannot afford to continue this sacrifice of money, materials and labour, especially when every effort should be made to husband her resources.

White Pine Blister Rust

Energetic Action being Taken to Stamp out the Pest

An outbreak of the white pine blister rust has been discovered in the Niagara peninsula of Ontario. The Dominion Botanist and the provincial Department of Lands and Forests are co-operating in the work of detecting and eradicating this pest, which, if allowed to spread, will cause enormous loss to the country. E. J. Zavitz, provincial forester, is in charge of the field work, assisted by several inspectors.

In the United States, the situation has become very serious, the infestation having already been discovered in the New England States, and in New York and Pennsylvania. A federal and state campaign is being waged to prevent the further spread of the disease.

The white pine blister rust is a disease very destructive of all white pines. Ninety per cent of the infections came from a single German nursery, but further danger from this source has been averted by a quarantine against all shipments of five-needle pines from Europe. The U. S. Department of Agriculture, in co-operation with state Horticultural Boards, is now taking steps to prevent the spread of the disease to the western states. While the attacks of the rust have thus far been confined chiefly to the white pine of the east, it is known to be an enemy also of the western white pine and the sugar pine.

The importance of the white pine in Canada demands that all necessary support be given the federal and provincial authorities in their defensive campaign against this destructive enemy of one of our most important timber trees.—C. L.

In 1915 Canada had an approximate fire loss of \$15,500,000. Fire insurance companies paid out for fire losses \$14,130,208, or approximately \$1,500,000 less than the fire loss. The owners of destroyed property consequently had to bear the latter loss.

Fire insurance companies collected from the people in premiums \$26,530,293, which, added to the margin of \$1,500,000, gives an approximate total of \$28,000,000. This latter figure represents only the actual cash outlay as represented by insurance protection, and value of property consumed in excess of insurance. To this must be added the loss in disruption of business, damage through hasty removal of property, the expense of upkeep of fire