

Prize Essay in Barnjum Contest

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In Two Parts—Part Two

The third major cause of forest fires is defectiveness in the screens of smoke-stacks, whether the stacks belong to a railroad locomotive or to a stationary engine in a saw-mill. Facts need not be cited to prove this. Take a trip from Hearst to Fitzpatrick on the Transcontinental during the summer months and ample evidence will be forthcoming. Every stack should be inspected by an inspector, at the commencement of the summer season, especially the stacks of railway locomotives that are often used at various points to shunt cars of pulp or ties; these are usually locomotives whose days of usefulness are almost past, and therefore not well equipped. The remedy is simply a matter of inspection and should cause no trouble. Under our present system the stacks are inspected once a year by officials appointed by the railway companies themselves. The unsatisfactory nature of such an inspection is obvious; moreover, the inspection is close only of those engines operating on the main "runs." The very engines that are used for shunting purposes at various points along the line of railroad should be most closely inspected. They operate in the very heart of the timber district. An independent inspector should be appointed answerable to the Government, with full authority to inspect all stack screens in a district, whether it be that of a railroad locomotive or that of a saw-mill. If necessary, each inspector should have one or more competent assistants.

Railway Construction.

Another cause of fires which is more or less of a temporary nature, is the careless burning of a right-of-way "slash" along the lines of a new railroad. A great number of fires can be traced to carelessness during railway construction. During such construction a special fire control should be put on the new line during the dry summer season. Close co-operation between the constructing company and such fire control will eliminate all danger.

Closely linked with the above causes and the remedies proposed for the specific misdeeds is an organization which has been built up primarily for the purpose of preventing fire, though, as a fighting force, it has proved its worth, namely, the fire-ranging system in vogue in Eastern Canada. Is the present system capable of improvement? In some respects, yes!

Each year about the first of May, men are sent throughout the country to act as fire-rangers. They stay on certain beats which they travel regularly till about the middle of September. These are the men that issue permits to settlers and are in constant touch with the summer intruders into our forests. A great number of these fire-rangers are students of our universities, and have no intimate knowledge of practical ways by which to combat fires; on the other hand, they possess intelligence, initiative, decision, and for the most part are thoroughly interested. To offset their lack of knowledge, it would prove of the greatest benefit, if the rangers of a district were called together by the Chief of that district one week before they go on their routes, during which he would give practical talks and illustrations of the nature of their work. He should impress on them the importance of knowing minutely the topography of the area they patrol. The knowledge of the positions of

lakes, creeks, sloughs, swamps, saves useless fighting and hard work. He should know when and how to back-fire, call out men, the benefit of early morning fighting, the special effort that must be made against ground fire, especially in our pulp areas where the fires eat through the muskeg till they reach good feeding ground when they burst forth again and destroy more timber. A week spent in such a way would be of tremendous advantage to every fire-ranger, student or otherwise.

In every fire district the Chief Fire-Ranger has his headquarters at some central point but he is not in direct touch with his fire-rangers. This is a serious drawback once a fire has started. As soon as possible after a fire has started, a sufficient force should hasten to the threatened point to subdue it or limit its range. Under our system in Eastern Canada this is practically impossible. To remedy this there should be at least three stations, situated on commanding eminences which would be in telephonic communication with the Chief at headquarters. Their duty would be to detect fires and to report to the Chief where fires were starting. Equipped with range smoke-detectors, they would give the position of a fire to a nicety. The rest could safely be left to the Chief. Certain districts, in order that the whole area might be covered need more than three such stations. When this is so, build as many as the fire district demands, but there is hardly any district in this country that could not be well watched by five or six such stations.

The fire-ranging system has been discussed at length because it is the only system that can control the first two major direct causes of forest fires, namely, settlers' slash-burn and intruders' fires. A ground organization is imperative to cope with these two causes, and nothing else can take its place. It has been stated that the aeroplane will do away with all ground organizations. For reasons that are obvious from what we have said, this can never happen. As a means of preventing fire the aeroplane is useless; as a means of fighting fire, it is only one of many; as a means of detecting fire it is invaluable, especially in large virgin areas. The aeroplane has its place in forest protection but its sphere is limited.

It is hardly necessary to add that every fire district should be equipped with track speeders, power launches for rivers and lakes, and portable gasoline pumps. Their usefulness has been proved. A district without them is far behind the times.

Prevention of forest fires is the outstanding problem in all discussions of forest protection. Yet, it is an essential part of forest protection to eliminate every possible help to a fire once it has started, and to fight it as effectively as possible. Unquestionably, the greatest aid that a forest fire receives is the immense logging slash and debris that covers areas of our tree-covered soil. More scientific logging methods must be followed especially in our pulp areas. In these areas it is a common sight to see tops of from eight to ten feet in length with diameters of four, five and six inches left after a season's operations. This is a tremendous waste of wood. The fault lies that in most pulp areas in Canada the log lengths are twelve and sixteen feet. By the adoption of the four-foot length much wood would be conserved and an immense log slash eliminated. It is bound to come—why not adopt it now?