

guishing fires, etc. As a result of all this, both the number of fires caused by locomotives and employees and the amount of property destroyed is decreasing rapidly.

Having regard to these facts, note the representations of the Ontario Department of Lands and Forests, which should be an accurate and complete mirror of forest losses and their causes during the year under consideration, 1915.

Out of a total of 430 fires of all kinds, reported to the Department by its own patrolmen and rangers in 1915, 317 fires were reported by rangers patrolling just two railways—both government-owned and operated—the Transcontinental and the T. and N. O.

The Private Owned Lines.

What about the record of the four other railways—non-Government-owned—in Ontario? The patrolmen on these lines are appointed direct by the companies, subject to the regulations of the Board of Railway Commissioners of Canada. A total of 110 fires was ascribed to the railway zone of the C. P. R., C. N. R., G. T. R. and Algoma Central, but only 59 of these were of "known railway causes," doing a total damage of \$4,156.25.

With our attention focused upon the foregoing piece of information, that on the four company-owned railways in Ontario fires from "known railway causes" accounted for damage amounting to \$4,156.25, and being anxious to learn the origin of the really serious timber losses sufficient by Ontario in an average year, we peruse the department's declaration that 57 per cent of all fires in Ontario forest lands in 1915 were reported by rangers patrolling the Government-owned railway lines.

The year 1915 was, of course, a period of comparatively small damage by forest fires. Then what of 1914, a bad fire year? The Ontario Department of Lands and Forests declared that 95 per cent of all fires known to the Department were reported by rangers patrolling railway lines, though only 30 of these caused damage to timber.

A False Impression.

The impression given to the reader by these annual reports is wholly inaccurate. He would assume, naturally, that the railways

were indulging in a carnival of destruction, whereas, by the Department's own figures, the "known railway fires" of four of the six railways, did a little over \$4,000 damage to Ontario forest growth in 1915.

Resolving into the plainest possible form all the information received in 1915 in regard to Ontario's forest guarding we learn that:

One hundred and twenty-nine men, employed by the province to patrol the Transcontinental and the Temiskaming and Northern Ontario railways reported 317 fires, while the C. P. R., G. T. R., C. N. R. and Algoma Central reported through the twelve government inspectors 110 fires.

One hundred and sixty-six men on Ontario's forest reserves reported 52 fires.

One hundred and seven men on unlicensed Crown lands reported 61 fires.

Two hundred and eighty-six men ranging the Crown lands under license reported 56 fires, "37 doing no damage."

On the face of this showing, 559 rangers, working in districts back from the railways managed to report about half as many fires as 129 rangers working along two public-owned railway lines.

These figures, undoubtedly, are not capable of disclosing more than a confused fraction of the actual story.

Who will credit for a moment that 95 per cent of the forest fires in Ontario in 1914 originated within the railway zones? or that 286 men diligently patrolling 10,000,000 acres in 1915 could discover only 19 fires causing damage? or that 107 men can give even the shadow of real protection to 50,000,000 acres of unlicensed Crown Lands containing more or less merchantable timber?

A Few Explanations.

How, then, are these puzzling pieces of information to be accepted?

One obvious explanation of the high percentage of timber losses ascribed to the railway zones is that railway patrol is intensive and fairly well supervised. On the Transcontinental and Temiskaming and Northern Ontario lines (Government owned) the rangers are paid by the province and are hence under closer control.

The meagre information concerning losses on unlicensed lands is the

reasonable product of a small staff of rangers, plus poor supervision.

The failure of the Government statistics from licensed lands to uncover more than a small part of the annual fire record proceeds from the fact that rangers on the berths are not paid by the province but by the licensees and therefore not subject to the same degree of control. In addition, the supervision of these men is such as, applied to a modern manufacturing plant, would breed laxness and waste at every turn.

Perhaps the most important of all explanations is that Ontario is the only province owning a large area of Crown Lands which does not require all rangers to submit individual reports of each fire on special forms. The Department depends upon the vague, happy-go-lucky and incomplete entries in the rangers' diaries which are not turned in until the end of the season. The rangers' diaries pay little attention to the really important information connected with forest fires—the extent and character of destroyed areas. This system may give the Department some knowledge of the numbers of timber fires, but is an entirely unreliable index of the annual loss.

The Timber Berths.

The reader will not require more argument than a reproduction of the Department's own statements to recognize a very pronounced lack of business efficiency on the timber lands under license. Eight supervisors only were made responsible for the inspection of 286 men. The meagreness of this managing force is a bid for poor discipline. Ontario has about 10,000,000 acres under license by lumber and pulp companies. The cost of patrol and fire fighting is borne entirely by the licensees. The salaries of the eight supervisors appointed by the Government, are also paid ultimately by the licensees. This 10,000,000 acres represents, obviously, the most accessible and valuable timber remaining to the province. Yet in providing protection against fire, the Government, as trustee, requires the eight supervisors to assume the direction of an average of 36 men each. The Ontario Government in the Missisaga Forest Reserve gives four supervising officers to 40 rangers and this ratio of one officer to ten men is the least that can be done