

overload of current, grass fires, kerosene explosion, grease boiling over, hot box.

The National Board of Fire Underwriters of the United States, continuing its plan of education on the need of better protection, issued an exhaustive classification of fire losses in 1909, showing why the insurance companies are forced to ask higher rates in America than in Europe, and why rates in America itself necessarily vary. Taking thirty of the largest cities of the United States, the per capita loss in 1909 was shown to vary from \$1.36 in St. Louis to \$4.55 in Kansas City. Higher per capita loss was shown in some of the smaller centres, like the city of Racine, where it ran to \$24.29. The total annual fire loss is estimated at \$200,000,000, and fire specialists go so far as to assert that \$150,000,000 of this is waste from negligence or lack of precautions. The table of comparisons drawn up by the underwriters from consular returns in 1905, the only recent year in which statistics of the kind were gathered in Europe, showed an average loss of 61 cents per capita for thirty European cities as against \$3.10 for 252 American cities. Taking the number of fires to each 1,000 of population here and in Europe, it was found to be 4.05 in the United States against .86 in Europe.

The annual average losses for six nations in Europe were compiled from records of varying years and years grouped, with this result:—

| Country. | Annual fire loss. | Loss per capita. Cents. |
|-------------------|----------------------|-------------------------------|
| Austria | \$ 7,601,389 | 29 |
| Denmark | 660,924 | 26 |
| France | 11,699,275 | 30 |
| Germany | 27,655,600 | 49 |
| Italy | 4,112,725 | 12 |
| Switzerland | 999,364 | 30 |

Or an average loss per capita of 33 cents.

Estimating Canada's population last year at 7,500,000, the fire loss per capita in the Dominion was \$3.14, compared with \$2.70 in 1909, with an estimated population of 7,000,000.

In Berlin, where the losses amount annually to less than those of one moderately large fire in the United States, the excellent conditions are due to the attention paid to the methods of construction. Building police have authority to compel the use of iron and steel girders, fireproof stairways and roofing, heavy fireproof ceilings and all details that may diminish the risk of conflagration.

Canada cannot claim to be making untrammelled progress until its fire record has been improved considerably.

DIVERSION OF WATER AT NIAGARA FALLS.

Much has been written on the injury being done to the Niagara Falls by the diversion of water for power purposes by the different power companies operating there. The American Civic Association have been consistently agitating increased restrictions on the water used by the companies, and to some extent the grounds of their objection have been based on the reports of the American Army engineers. On the other hand, much has appeared in the press which has no bearing on fact, but is due to the vivid imaginations of newspaper writers.

Effusions are constantly appearing in the press stating that if the power companies at present operating are allowed to develop the full amount of their franchise that the Falls will practically disappear.

There hardly seems much danger of this when we remember that with the full development only about eighteen per cent. of the average flow of Niagara River will be utilized.

It is now being agitated in the United States by the American Civic Association and others that the provisions of the Burton bill, which until last June was in operation, and which restricted the amount of power allowed to be imported to the American side, should be again put in force. For that reason the city of Niagara Falls, N.Y., have appointed a committee to arrange for the watching the result when the maximum amount of water allowed the power companies is diverted on a date named. Engineers will measure the drop in the water going over the Falls and will make an official report to the Federal Government. The members of the Senate and House Committee on Foreign Affairs and the United States engineers will be invited to witness the test.

It might be added that the power companies have invested a great deal of money at the Falls, and it is hardly fair to them that agitation developed by irresponsible people should cause heavy losses on their investment. If the diversion of this water is going to seriously affect the scenic beauty of the Falls, then the public should know it, and should take measures to prevent the destruction of the Falls. If, on the other hand, however, it is not going to seriously affect the flow, then the companies should be allowed to finish their work.

For that reason this independent test will be of great interest to both the public and the companies.

REFORESTING WASTE LAND.

The subject of reforesting waste land is becoming one of considerable interest to Canada. The Ontario Government is carrying on considerable experimental work along this line in Norfolk county. The Norfolk Forest Station, started in 1909, at present is comprised of 1,300 acres of land. Portions of this land have been cleared for tillage and then abandoned, while the remainder contains second growth of white pine, red and white oak, and a number of less valuable species. About one hundred acres of this tract have been planted with different species of pine, oak and walnut.

It is the opinion of Mr. E. J. Zavitz, Forester for the Department of Agriculture, that if southern Ontario is to have any forest left it must be by protecting the remnants left on the non-agricultural soils and re-planting where necessary.

There are hundreds of square miles of unproductive sand lands which could be obtained at low cost, and which would produce hardwoods, of which the supply is now largely coming from the United States, and of which the source there is gradually disappearing.

Near many Canadian villages, towns and cities there are areas of waste sandy and rocky land which has been cleared of timber or abandoned, worn-out for farming land. Such areas usually detract from the values of neighboring property, and their unproductivity increases the proportionate burden of taxes on the community and renders such public works as roads and bridges unduly expensive or proportionately poor in quality.