

cessfully competing with Canadian pulp, probably owing to the lower cost of labor in these countries and perhaps, also, to the fact that smaller profits may be satisfactory to capital. The home market, also, has increased its production by some forty per cent since 1908, when it took 34 per cent, and in 1911 took almost 48 per cent.

Canada now supplies approximately half of the United States import of pulp. Less pulpwood in the unmanufactured state was exported in 1911 than in any year since 1907. The decrease is confined to Quebec, which sent to the United States over 140,000 cords less pulpwood than in 1910; Ontario and New Brunswick, on the other hand, have both increased their imports to the United States. Still, of the 1,520,227 cords of pulpwood produced in Canada in 1911, considerably over half (nearly 56 per cent) is exported unmanufactured, the quantity being 847,939 tons. The total value of the pulpwood produced was \$9,678,616, that of the pulpwood manufactured in Canada \$4,338,024, and that of the export being \$5,340,592. Had Canada manufactured into pulp the pulpwood she exported, she would have received, instead of the \$5,340,592 she actually got, approximately \$15,000,000. The pulpwood thus exported would have supplied sixty eight mills of the average size of those operating in Canada, and the Dominion, instead of having fifty four pulp-mills, would thus have a hundred and twenty two; Quebec could supply, with her export, forty five mills of the average size operating in the province, and New Brunswick could double her number.

Imports of wood-pulp nearly doubled in value, namely, from \$49,000 in 1910 to \$94,000 in 1911.

## U. S. FOREST RANGER QUALIFICATIONS.

The requirements and duties of forest rangers on National Forests in the United States are thus described in 'The Use Book,' which contains the regulations and instructions for the use of the National Forests:

'A ranger of any grade must be thoroughly sound and able-bodied, capable of enduring hardships and performing severe labour under trying conditions. He must be able to take care of himself and his horses in regions remote from settlement and supplies. He must be able to build trails and cabins, ride, pack and deal tactfully with all classes of people. He must know something of land surveying, estimating and scaling timber, logging, land laws, mining, and the live-stock business.

'On some forests the ranger must be a specialist in one or more of these lines of work. Thorough familiarity with the region

in which he seeks employment, including its geography and its forest and industrial conditions, is usually demanded, although lack of this may be supplied by experience in similar regions.

'The examination of applicants is along the practical lines indicated above, and actual demonstration, by performance, is required. Invalids seeking light out-of-door employment need not apply. Experience, not book education, is sought, although ability to make simple maps and write intelligent reports upon ordinary forest business is essential.

'Where saddle horses or pack horses are necessary in the performance of their duty, rangers are required to own and maintain them. The Forest Service furnishes no personal or horse equipment.

'Rangers execute the work of the National Forests under the direction of Supervisors. Their duties include patrol to prevent fire and trespass, estimating, surveying, and marking timber, the supervision of cuttings, and similar work. They issue minor permits, build cabins and trails, oversee grazing business, investigate claims, report on applications, and report upon, and arrest for, violation of forest laws and regulations.'

The examination consists of questions regarding the use of the forest, supplemented by a field test to show the applicant's fitness to do the actual work of a ranger. Education and experience are rated on the answers to the questions on these subjects in the application form and on the applicant's use of English in the written test. Horses for the tests in riding and packing are provided by the Forest Service.

The examination is under the control of the Civil Service Commission, and not of the Forest Service.

The law requires that, when practicable, forest rangers must be qualified citizens of the State or Territory in which the National Forest on which they are appointed is situated. Since the list of local eligibles must be exhausted before eligibles residing in other States can be appointed, the chance of citizens of outside States who go to the National Forest States and take the examination to secure an appointment is small.

The per capita lumber production in Canada in 1909 was about 684 board feet, probably the greatest in the world. The per capita production in the United States in 1909 was 470 board feet. It is probable that with an increased demand due to forest depletion in other countries, with the development of transportation system to northern forest regions, now inaccessible, the forest production of Canada will still further increase even though it has already reached proportions which under present systems of administration the forest of this country cannot permanently support.