

Several other investigations were also conducted. The strength of telegraph top pins of Canadian birch, beech and maple was compared with that of top pins of imported woods. Results demonstrated that the Canadian hardwoods possessed ample strength for the purpose. The strength of paper cores of different designs was further investigated, the shearing strength of plywoods was enquired into and a variety of minor tests and studies made.

In addition the preparation of maps showing the commercial distribution of our various timber species was undertaken. A considerable amount of work was done and the maps were nearing completion by the close of the year. No such maps have heretofore been available for Canadian woods and when complete they will be of material assistance in our researches on the strength of timbers and for other purposes.

#### DIVISION OF WOOD PRESERVATION

The major investigations under way in this division during the year were as follows:

Creosote Treatment of Hard Maple for Railway Ties. Object: To work out a satisfactory method of creosote treatment of this wood for tie purposes and to establish service tests in track.

Maple proved to be a most erratic wood as regards penetrability with creosote oil, some material being very readily penetrable and some extremely refractory. An endeavour was made to ascertain the