

viz., those who develop and utilise the forest resources—lumber-men and manufacturers. The first class should be considered a safe and conservative one, holding forest property to the extent of from 35 to 40 per cent. ; and we might feel safe regarding the fate of this part of the forest area. Whatever attempt at rational forest management exists in the United States is found among the farmers. It is probable, however, that a large part of their forest property is held only for speculative purposes, and the opportunity of paying off indebtedness by sacrificing the wood-lot is not unfrequently embraced. The forest-land is not treated in a conservative manner, which arises from lack of conception of the true value of this part of the farm."

And in another place in the report the same authority says :—

" Situation.

" This division [Forestry] has now been in existence for more than a decade [*i.e.*, 1882], during which time it has been engaged in an endeavour to teach the people of this country that the present methods under which our forest resources are managed are uncivilized, undesirable, and destructive, not only to the resources themselves, but to many other interests depending upon the material as well as upon the indirect influence of the forest. Although there seems to exist a considerable amount of public interest in the subject, we can nevertheless feel no great satisfaction at the result of the work. There must be some strong reason which is antagonistic to a change of methods, for the fact that the slaughter of timber lands without any regard to the future, and the burning of square miles without any reference to the destruction of values, continue. Remedies have been suggested, and discussed to satiety, but of practical application we have had as yet but little. It seems therefore proper that we should once more look over the field, investigate the situation, and find the reasons for a continued absence of more rational treatment of our woodlands ; in fact, make a review in this centennial year of what we have done with and for our forest resources, state what their present condition is, and what we hope for the future.

" Original Condition of Forest areas.

" When Columbus discovered America, the territorial distribution of forest areas in the United States, and, indeed, on the whole continent, could be divided with more or less precision into three grand divisions :—

" (1.) The Atlantic forest, covering mountains and valleys in the east, reaching westward to the Mississippi River and beyond to the Indian Territory, and south to Texas, an area of about 1,361,330 square miles, mostly of mixed growth, hardwoods and conifers, with here and there large areas of coniferous growth alone—a vast and continuous forest.

" (2.) The mountain forest of the West, or Pacific forest, covering the higher elevations below timber-line of the Rocky Mountains, Sierra Nevada, and coast ranges, which may be estimated at 181,015 square miles, almost exclusively of coniferous growth, of enormous development on the northern Pacific Coast, more or less scattered in the interior and to the south.

" (3.) The prairies, plains, lower elevations, and valleys of the West, with a scattered tree-growth, on which, whether from climatic, geologic, or other causes, forest growth is confined mostly to the river-bottoms, or other favourable situations— an area of about 1,427,655 square miles, of which 276,965 square miles may be considered under forest cover of deciduous species east of the Rockies, and of coniferous and deciduous species in the west of this divide.

" Until the present century, and, in fact, until nearly the last half of it, the activity of man on this continent has practically been confined to the eastern portion, which, as stated, was originally covered with a dense, or at least, continuous forest. The substructure of the entire civilization of the United States was hewn out of these primeval woodlands. Out of the vast virgin forests of the eastern half of the country there have been cleared for farm use during this time 250,000,000 acres, or 400,000 square miles, leaving about 961,330 square miles covered actually or nominally with forest-growth or waste.

" Timber being a great obstacle to the settlement of the land, and the market for it until recently being confined and limited, a large amount had to be wasted and disposed of in the log-pile, where the flames made quick work of the scrub as well as of the finest walnut-trees. The settlement of the western mountain country, although emigration to Oregon began in 1842, assumed proportions of practical importance only when the gold-fever took many travellers over the plains and mountains to California in 1849 and the following years.

" If only the legitimate need of the population of this region for cleared land and for timber had made drafts upon the forest resources, the change in forest conditions would have been insignificant, but the recklessness which the carelessness of pioneer life and seemingly inexhaustible resources engender has resulted in the absolute destruction by fire of many thousand square miles of forest-growth, and the deterioration in quality and future promise of as many thousands more. The third region, the so-called treeless area, has experienced, since the advent of the white settlers and the driving-out of the Indians, changes which are almost marvellous. The prairies were reached by settlers in any considerable number only as late as the third and fourth decades of this century, but they and their successors have not only occupied a farm area of 80,000,000 productive acres, but they have also dotted the open country with groves, smaller or larger, either by planting them or by keeping out fire and cattle, aiding the natural reforestation.

" Causes of reduction in Forest Areas.

" While the requirements of the settlement of agricultural lands have necessitated the removal of forests, their principal destruction has come from two other causes—fire, and wood consumption. The latter has assumed proportions which no other country of the earth can equal, for the annual consumption of wood in the United States for all purposes reaches the enormous amount of over 22,000,000,000 cubic feet,* or about 350 cubic feet *per capita* as against 12 to 14 cubic feet *per capita* in Great Britain, or about 40 cubic feet in Germany.

* Mostly firewood split from first-class trees.