

tough timber suitable for carriage building purposes, although large quantities would have to be very carefully examined, selected and sorted by competent persons, in order to secure woods of fine and suitable quality.

Where elasticity is an essential quality required, the trees should be felled and sent to market in youth or middle age, when such quality is naturally in the wood, for it is with trees as it is with the human body, strength and elasticity must be sought in youth and middle age, not at full maturity or old age.

In order to economize weight, transport, freight, &c., it is desirable that trees should be converted into planks, as is done by timber merchants in England, who convert it where or very near to where it grows, so as to avoid all needless expenses for handling.

Moreover, after planking, great care should be taken to avoid another cause of loss by the timber splitting; for the harder and better the quality, so much greater is the chance of splitting in seasoning. Unless this is provided for and prevented, there may be a waste and loss of 20 per cent. when fully seasoned. Samples have been sent to Mr John Dyke, the Agent of the Canadian Government in Liverpool, to forward to the Department of Agriculture at Ottawa, showing how the various woods used in England by carriage builders are protected by wood clamps strongly nailed on the ends of all boards and planks one inch and upwards in thickness, and glued canvas smeared with strong paint on the thin boards used for panels.

With timber thus prepared and carefully handled in transport there need be little injury or waste, and thus the price can be so arranged as to be advantageous both to seller and buyer; every unnecessary waste should be avoided; and producer and consumer should be brought into close contact for their mutual advantage.

A system of second or artificial seasoning of timber seems to be very general in the United States in addition to the natural system of seasoning wood in the open air, thus—many factories I visited had hot rooms and drying closets and boxes in which seasoned converted wood is kept for several days previous to the framing being finally fastened together; this is probably a wise precaution for objects made of wood and intended to sustain the great heat of the summer in some of the States; but the system is carried a step further in some cases, as for instance at the great factory of the far-famed Pullman Railway Carriage Company, at Pullman, near Chicago. The timber there is exposed to the influence of steam for several days in closed chambers in order to wash out the sap; after a certain time, ascertained by experiment and experience, the steam is turned off and a current of hot air is blown in, the moisture being carried away by exhaust fans. It is contended by scientific experts that the sap of the wood is the part that sooner or later causes decay; containing as it does certain proportions of starch, sugar, or syrup according to the nature of the tree. Under conditions more or less favourable, this has a tendency to ferment, changes its character and decays, carrying the fibrous portions of the wood with it. If the steam and dry air really carry off the elements of decay and dissolution, and the cells that contained the sap close firmly, decay is deferred or becomes impossible. Be this as it may, the materials and workmanship of these choice and ingenious Pullman cars leave little to be desired, and if this American system has as much merit as its inventors and agents claim for it, a new era for workers in wood may have set in at which many will rejoice. The system has already been introduced into England, and before many years have elapsed we may possibly be able to hear the experience of those who have put it to the test.

At St. Catharines, in Canada, near Niagara, I found a prosperous branch of an American wheel manufacturing company, and it is probable, that with care and enterprise its business may be extended, and others established in the colony to meet the demand for good wheels in England.

While receiving the assistance of the Canadian Government through the courtesy of H. B. Small, Esq., of the Department of Agriculture and his colleagues at Ottawa, I was afforded opportunities of seeing the enterprise, industry, skill, and rapidity of

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