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HON. A. S. HARDY,

COMMISSIONER OF CROWN LANDS FOR ONTARIO.

MON. ARTHUR STURGIS HARDY, Q. C., Commissioner of Crown Lands for the province of Ontario, whose portrait we present herewith, is a well known figure among lumbermen, from the fact that he has had in his hands for a number of years the administration of a department with which they have had much to do. A brief sketch of his career will be of interest.

Mr. Hardy was born at the little village of Mount Pleasant, in the county of Brant, Ont., on the 14th of December, 1837. His father was Russell Hardy and his mother Juletta Sturgis, both of V. E. stock. Russell Hardy was a farmer at Mount Pleasant, but subsequently moved to Brantford and engaged in commercial pur-

suits. The subject of this sketch commenced his education at the school in his native village, and afterwards attended the Brantford grammar school and the Rockwood Academy. Having made up his mind to study law, he entered his uncle's office at Brantford, and afterwards spent some time in the office of the Hon. R. A. Harrison, afterwards Chief Justice Harrison, in Toronto. In 1861 he passed as an attorney, and immediately commenced practice at Brantford. In 1865, at Easter term, he was called to the bar. At that time Hon. E. B. Wood was the leading lawyer in Brantford, in fact he was one of the leading practitioners in Ontario. Sometimes called "Big Thunder," his elocutionary Powers were known far and wide, and by means of the power which a strong mind exercises over weaker ones, he was able to sway juries almost ^{at his} will. But the young lawyer who had just Passed was ready to face him. The first brief he held was in an important case, in which he was opposed to his powerful elder. Mastering all the details of his case, he presented it with marked ability, and won. Thenceforward his Success was assured. His business grew, and a lucrative practice was rapidly built up. His success in criminal cases was remarkable. From 1865 to 1867 de defended no less than 16 prisoners charged with capital offences, of whom only one was convicted, and he did not suffer the extreme penalty of the law. In 1867 he was appointed city solicitor for Brantford, in 1875 he was elected a bencher of the Law Society, and ⁱⁿ 1876 made a Q. C.

Such a man was almost certain to be called upon to take an active part in politics, and few

resist the temptation. When Hon. E. B. Wood entered the government of the late Hon. John Sandfield Macdonald, in 1867, Mr. Hardy was urged to oppose him. He wisely declined, preferring to give his entire attention for a time to his profession. He, however, took part in the campaign, and it was largely due to his efforts that Mr. Wood's former majority was greatly reduced. In 1873, when Mr. Wood resigned to take the appointment of Chief Justice for Manitoba, Mr. Hardy took the field as a candidate, and was elected, after a bitter contest, over Mr. J. J. Hawkins, a strong local candidate, by a majority of 189. Two years later, at the general election, no one was found to oppose him, and he was returned by acclamation. He has since sat continuously for South Brant.

In 1877 Mr. Hardy entered the government of Sir Oliver Mowat as Provincial Secretary and Registrar. On the retirement of the late Hon. T. B. Pardee in 1889 he was transferred to the Department of Crown Lands, which he has since continued to administer.

Mr. Hardy early evinced those qualifications which

have contributed in such a marked degree to his success. While attending the Mount Pleasant school as a boy, he was fond of elocutionary exercises. He is a ready and effective speaker, a good debater, has a great amount of dash and fire, combined with attention to details, mental alertness and a pleasing manner. He is quick in detecting the weak points in an opponent's argument, ready at repartee, and can work in a humorous story with effect. He is withal a hard hitter, and where vigorous campaign work is to be done, is the member of the government usually selected. He is earnest and enthusiastic, a hard worker, and his administration of the crown lands department has been able and vigorous. Whether the policy pursued is the best for the country we leave for the politicians to decide.



Hon. A. S. HARDY.

In the event of a vacancy in the premiership while the Reform party is in the ascendant, Hon. Mr. Hardy will be the coming man.

Mr. Hardy is a member of the Church of England. On the 19th of June, 1870, he married Mary, daughter of the late Mr. Justice Morrison, by whom he has four children. While his home is at Brantford, most of his time is spent at the seat of government in Toronto.

STRENGTH OF BRIDGE TIMBERS.

A T the fifth annual Convention of the American Association of Railway Superintendents of Bridges and Buildings, held at New Orleans in October, a report was presented by a committee which had been appointed to investigate the strength of bridge and trestle timbers, with special reference to Southern yellow pine, white pine, fir and oak. The report contains some very interesting facts for timbermen. It appears from the tests applied that Canadian pine stands high up in its adaptability for railway bridges and trestles, the only woods which surpassed it being Georgia yellow pine and

Douglas yellow fir. Summarizing the conclusions of the committee we have the following facts brought out:—

Of all structural materials used for bridges and trestles timber is the most variable as to the properties and strength of different pieces classed as belonging to the same species.

The various names applied to the same species in different parts of the country lead to great confusion in applying the results of tests.

Variations in strength are generally directly proportional to the density or weight of timber.

As a rule, a reduction of moisture is accompanied by an increase in strength; in other words, seasoned lumber is stronger than green lumber.

Structures should be, in general, designed for the strength of green or moderately seasoned lumber of average quality and not for a high grade of well-seasoned material.

Age or use do not destroy the strength of timber, unless decay or season-checking takes place.

Timber, unlike materials of a more homogeneous nature, as iron and steel, has no well-defined limit of elasticity. As a rule, it can be strained very near to the breaking point without serious injury, which accounts for the continuous use of many timber structures with the material strained far beyond the usually accepted safe limits. On the other hand sudden and frequently inexplicable failures of individual sticks at very low limits are liable to occur.

Knots, even when sound and tight, are a cause of weakness both in beams and struts. They are detrimental to timber even in compression.

Except in top logs of a tree, or very small and young timber, the heart-wood is not so strong as the material further away from the heart.

Top logs are not as strong as butt logs.

Compression tests vary less for one species of timber than any other kind of test, and are therefore the most reliable.

Long timbers generally fail by lateral deflection or buckling when the length exceeds the cross section by 20 diameters.

Uneven end bearings and eccentric loading of columns produce more serious disturbance than is generally supposed.

Compound columns show the same unit resistance as each component stick.

More attention should be given in practice to the proper proportioning of bearing areas, in other words, the compressive bearing resistance of timber with and across grain, especially the latter, owing to the tendency of an excessive crushing stress across grain to indent the timber, thereby destroying the fiber and increasing the liability to speedy decay, especially when exposed to the weather and the continual working produced by moving loads.

The strength of timber, the report points out, varies greatly according to the physical properties of different sticks of the same species, due not only to locality where grown but also to percentage of moisture, degree of seasoning, grain, texture, proportion of hard and soft fibres, presence of knots, etc.

The committee recommend further tests of the various timbers.

The results so far are eminently satisfactory as to the quality of Canadian pine, and must help to encourage its use for bridges and trestles.

The Sutherland-Innes Co., of Chatham, have assumed control of a large stave mill at Munising, Mich.