

subject to a hot sun in summer. The annual rings were as shown in Fig. 41. At 55,400 lbs. the beam failed by a longitudinal shear, as in Fig. 42 and 43.

Beam XXIII was taken from a trestle near Port Moody, and had been in position for a period of six and one-half years in a place subject to the heaviest rainfall in the province. Annual rings as in Fig. 44. At 47,560 lbs. the beam failed by the tearing apart of the fibres of the tension face, which was immediately followed by a longitudinal shear, as in Fig. 45 and 46.

Beam XXIV was cut from a log grown on a bench near Spuzzum, about 500 feet above the sea level, and had been in position eleven years in a district with a climate similar to that of Nova Scotia. Annual rings were as shown in Fig. 47, and the beam contained several knots and season cracks. At 41,000 lbs. material at one end of the beam was crushed in. The ends, partially decayed, were sawn off and the load increased to 76,900 lbs., when the beam failed by longitudinal shear.

Beam XXV had been in service on Kamloops Lake for a period of eight years. The annual rings were as in Fig. 50, with heart showing on one of the faces. At 42,900 lbs. a large splinter broke off on the tension face and the beam failed by longitudinal shear, as in Fig. 51 and 52.

The following table gives a summary of the results obtained:

BEAM.	Dimensions in inches.	Weight in lbs. per cubic foot at date of test.	Maximum skin stress in lbs. per sq. in.	Coefficient of elasticity in lbs.
NEW TIMBER, SPECIALLY SELECTED.				
III.	66 x 5.375 x 4.125		10,441	2,178,100
XIX.	138 x 12.1 x 9.1	41.22	9,043	1,934,300
VII.	69 x 6 x 5.8125	39.92	8,712	2,044,115
XV.	198 x 15 x 6.125	38.92	8,020	1,989,400
NEW TIMBER, FIRST QUALITY.				
X.	198 x 14.875 x 6	37.80	4,027	1,629,616
XI.	204 x 14.875 x 5.6875	36.99	5,698	1,770,563
IX.	204 x 14.875 x 9	35.76	7,694	1,704,939
VIII.	60 x 5.125 x 5.5	35.74	8,382	1,584,692
XVIII.	138 x 17.8 x 8.76	35.59	5,196	1,329,900
XVII.	138 x 15.125 x 9	35.17	4,907	1,250,600
XX.	138 x 12 x 8.88	34.92	6,559	1,571,150
XII.	204 x 14.875 x 8.8125	34.79	7,645	1,678,300
XIII.	204 x 14.75 x 6.6	34.13	6,912	1,643,193
XXI.	138 x 8.98 x 5.95	30.83	7,784	1,588,400
VI.	60 x 6.125 x 6	30.23	7,116	1,489,215
I.	60 x 12.125 x 9		4,897	1,136,900
II.	66 x 12.125 x 3.625		4,378	1,146,900
V.	60 x 9.125 x 5	29.18	5,669	946,270
IV.	60 x 9.125 x 5	28.27	4,136	926,300
OLD TIMBER.				
XXIII.	186 x 14.35 x 8.78	36.59	7,339	1,878,950
XXII.	162 x 15.6875 x 7.75	33.75	7,086	1,665,560
XXV.	144 x 15.65 x 8.2	33.11	4,613	949,720
XXIV.	132 x 16.2 x 7.75	32.8	6,135	1,201,620

VALUABLE ARCHITECTURAL BOOKS.

The Maharajah, of Jeypore, India, has presented to the Toronto Public Library ten beautifully illustrated volumes descriptive of the architecture of the temple and ancient buildings of India. They form valuable works of reference for students of architecture.

ILLUSTRATIONS.

NEW MUNICIPAL BUILDINGS TORONTO.—E. J. LENNOX, ARCHITECT.

RESIDENCE, WALMER ROAD, TORONTO, FOR MR. JOHN M'KEE.—F. H. HERBERT, ARCHITECT.

SKETCH ELEVATION WITH PLANS FOR BRITISH COLONIAL PAVILIONS AT THE PARIS EXHIBITION OF 1900.

THE WEILER BLOCK, VICTORIA, B. C.—THOS. C. SORBY, ARCHITECT.

The premises occupy the whole area between Government and Gordon streets, with a side frontage on Broughton. The basement floor is lofty, well drained and dry, and will be perfectly lighted by the Luxfer Prism Co., of Toronto, the first introduction of these lights into the province. This storey will be used for floor cloths and other similar heavy goods and covers an area of about 12,000 superficial feet. The ground floor will be used for crockery, etc., and here will be placed the offices of the firm. Two spacious entrances give public access from Government street and Broughton street, and two more are provided for the entrance and delivery of goods in Gordon street. This floor covers an area of about 8,000 superficial feet and is 17 feet high, lighted by immense plate glass show windows, the largest in the province.

A first-class Otis electric passenger elevator provides rapid and easy communication with the basement and the upper four floors. The elevator well is closed in with handsome metal grille work and is surrounded by a broad easy staircase. An electric freight elevator also communicates with each floor. This elevator was erected by the Fensom Elevator Works, of Toronto, who also fitted up the contiguous new post-office building. The six floors provide a floor area of about sixty thousand feet.

The building is lighted throughout with electricity, with Frinck's most recent introductions for show window illumination.

The premises are heated throughout with steam generated in water tube boilers.

The building is of mill construction, massive posts, beams and joists of fir, and extra thick double flooring being employed. The walls are also massive in construction. Selected local brick is used in the front. The stone is from Saturna Island, the piers being built of very large, heavy stones with thick beds of lead between. The arched window openings in the Broughton and Government street fronts are of unusual size and boldness, and are filled in with large sheets of plate glass in ornamental window frames of oak. The roof is covered with extra thick steel plates.

The contractor for the brick and stone work is Mr. W. J. Smith; for the carpenter work Mr. F. J. Sherbourne, and for the roof and galvanized iron work, Mr. H. Cooley, who have each done most excellent and creditable work. The joiner's work and finishings were done by Messrs. Weiler at their own factory. The electrical work was executed by Messrs. G. C. Hinton & Co. Mr. Bryden discharged the duties of superintendent of works. The architect is Mr. Thos. C. Sorby, under whose personal supervision the whole of the work was carried out. The cost of the building was about \$60,000.

A ladder or scaffolding is no stronger than its weakest part; hence the discovery of a weak part should be immediately followed by an absolutely thorough repair.