The supports now being introduced can only be regarded as very temporary,—indeed, only patching up for the session; and in my opinion it would be very unwise to allow the roof to remain on for a longer period than six months.

They might, under favourable circumstances, hold together for several years; but, in the event of an earthquake or a south-east gale,—such as is frequently experienced in Wellington,—such a collapse as Dr. Hector suggests might occur.

Under these circumstances, I advise that the whole of the roof be taken off and reconstructed of proper materials, and all white pine taken out of the floors and elsewhere, as soon as possible after the Session is over.

The form of reconstruction is a matter of detail, which would depend on the requirements of the country or service, and would have to be considered hereafter.

I have, &c.,
W. H. Clayton,
Colonial Architect.

The Hon. the Colonial Secretary.

Memorandum for the Colonial Architect.

July 10, 1872.

The following is the result of experiments to test the four samples of wood submitted by you this day:—

Specimen marked A, remu, one quarter being sap wood, bore 150 lbs. with 1 in. deflection; strength unimpaired. Bore 100 lbs. with a deflection of $\frac{1}{4}$ in. Broke in the sap wood with 160 lbs.; deflection, 1·1 in.

Specimen marked B, white pine, rather inferior specimen, broke short with 25 lbs., 1·7 in. deflection. The usual breaking strain of this wood is from 55 lbs. to 85 lbs., according to the soil on which the tree grows.

Specimens marked C and D, white pine, much worm eaten, broke with $\frac{1}{2}$ lb.; no deflection. A structure of timber in this state would give no warning; and any strength it can have must depend on the thrust, and not the transverse strength.

James Hector.