"off, were tried comparatively with poles of the same dimension, cut "from a Riga spar of first-class, and the following results were found :

	Vancouver Pine.	Riga Pine.
"Maximum degree of bending "before rupture at the foot,	0 *m* 025	0 *m* 028
"At the head, . . .	0 019	0 016
"Mean, . . .	0 022	0 022
"Charge of rupture (per centi- "metres) squared at foot,	23 *k* 75	21 *k* 00
"At the head, . . .	16 11	19 68
	19 93	20 23
"Density of the wood at the "foot of the tree, . .	0 636	0 726
"Density at the head, . .	0 478	0 532
	0 557	0 629

"These experiments give a mean almost identical for the bending and "breaking of the two kinds of wood, while the density differs notably to "the advantage of the Vancouver wood.

"The only question still undecided is that of durability. The masts "and spars of Vancouver are woods rare and exceptional for dimensions "and superior qualities, strength, lightness, absence of knots, and other "grave vices.

"(Signed) L. A. Silvestre Du Perron,
"Chief Engineer of the Third Section.

"Toulon, September 21, 1860."

The question of durability suggested by this French engineer can be settled in a way to make a new revelation to ship-builders. A report on the subject of "Ship-building on the Pacific Coast," made to the Board of Marine Underwriters in San Francisco, December 16, 1867, by the Secretary and the Surveyor of the Board, says :

"These trees [Red and Yellow Fir], which constitute about one-half of "the dense growth of timber of Oregon and Washington Territory, have "become celebrated throughout the world for their magnificent propor- "tions, and the serviceable quality of the spars and lumber supplied from