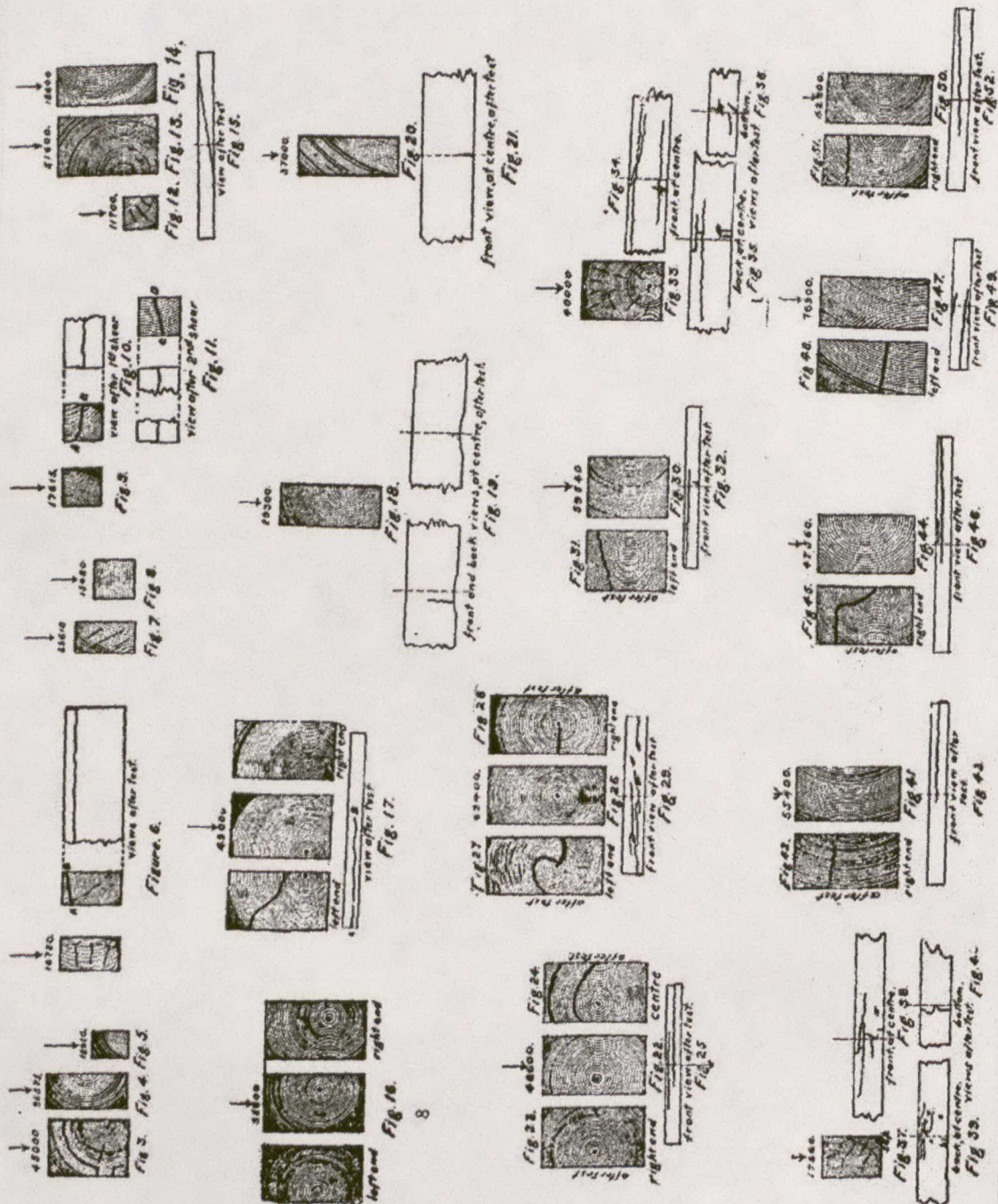


STRENGTH OF CANADIAN DOUGLAS FIR.

HEREWITH are given, in part, the results of tests made under the direction of Professor Bovey in the testing laboratory of McGill University, Montreal, to determine the strength of British Columbia Douglas

rings running as in Fig. 4. At 36,575 lbs. the beam failed by shearing longitudinally. After the fracture the load upon the beam was again gradually increased to 34,000 lbs. before a second failure occurred.

Beam III was of a specially excellent quality, with



fir. There were tested, in all, twenty-five beams, of which the following particulars and illustrations are given: Beam I was of good average quality, with annual rings as in Fig. 3. At 45,000 lbs. the beam failed by the tearing apart of the fibres on the tension face.

Beam II was of good average quality, with annual

clear, close, parallel grain, perfectly sound and free from knots, with annual rings as in Fig. 5. At 12,950 lbs. the beam failed by shearing longitudinally.

Beams IV to VIII, sent to the laboratory by the British Columbia Mills, Timber & Trading Company, were cut out of trees grown on the coast section of British Columbia, and felled in the fall or during the