TABLE SHOWING RESULTS OBSERVED AND CALCULATED BY USUAL METHODS AND BY NEELY'S FORMULA.

KIND OF WOOD.	Original Number of Beam.	DATA OBSERVED AND CALCULATED BY USUAL METHODS.									RESULTS CALCULATED BY NEELY'S FORMULA			
		Compression Endwise Strength.	Dimensions in Inches.			Deflections in Inches.		Young's Modulus in 1,000 lbs. per square inch.	Loads in Pounds.		Ratio of Deflections.	Numerical co-efficient in Equation 13.	Extreme Fibre Stress at Elastic Limit.	Stress in Extreme Tension Fibre at Rupture.	Theoretical Load at Rupture.
			Length.	Depth.	Breadth.	At Elastic Limit.	At Rupture.		At Elastic Limit.	At Rupture.					
		f_c	l	h	b	Δe	Δv	E	W_e	W	$\frac{\Delta e}{\Delta r}$	n	f^e	ft	W'
Short-leaf Pine.....	12	3,850	192	11·87	7·87	1·02	3·10	1,711	13,000	28,000	·329	1·240	3,380	9,600	27,600
"	28	3,590	216	11·9	8·2	1·80	6·24	1,483	13,300	23,500	·287	1·290	3,710	9,800	25,500
"	9	4,030	192	12·0	8·0	1·50	6·16	1,630	19,000	32,800	·244	1·340	4,750	12,200	32,400
"	10	3,900	192	12 0	8·0	1·39	4·31	1,340	17,000	29,400	·325	1·244	4,250	9,800	29,100
"	13	4,100	192	12·1	8·10	1·36	4·06	1,540	17,000	29,800	·334	1·233	4,130	10,000	31,200
"	29	4,450	216	11·75	7·9	1·92	4·86	1,703	16,000	24,500	·395	1·168	4,750	9,700	26,250
"	33	4,350	216	12·06	8·0	1·48	3·36	2,017	16,000	26,400	·440	1·125	4,460	8,800	26,370
"	38	4,500	216	12·0	7·95	1·77	5·57	1,718	16,000	27,240	·318	1·228	4,500	11,400	29,300
Long-leaf Pine.....	43	5,300	216	12·3	8 10	1·97	4·90	1,715	20,000	33,550	·402	1·160	5,280	11,400	34,900
White Pine	51	3,330	216	12·1	7·95	1·69	3·75	1,320	12,000	18,700	·450	1·110	3,340	6,600	19,900
Red Oak	3	3,030	192	12·0	8·0	1·50	7·94	1,646	9,000	25,800	·189	1·420	2,250	10,900	25,800
"	4	4,460	216	12·25	8·0	1·90	5·93	1,825	20,000	31,500	·320	1·250	5,400	11,300	31,000
"	8	3,470	216	12·25	8·37	1·71	6·70	1,485	14,000	26,000	·255	1·330	3,610	10,300	26,800

NOTE.—Columns of figures to be compared are in the same distinctive type.