Remarks.—The values of E for specimens  $a_i$ ,  $b_i$  c and d have been calculated from the first series of roadings only, and are consequently smaller than if repeated readings had been taken.

The mean direct tensile strength is 2.68 times greater than the calculated mean skin stress of the beam and 3.7 times greater than the mean compressive strength of the timber.

Specimens e1 and e2 contain the heart and show the least compressive strength. The ratios of length to least transverse dimensions in the compression specimens varied from 6.47 to 9.46, and the failure in each ease was due to direct crushing.

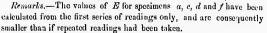
The shearing strength of the round specimens is 1,42 times greater than that of the flat specimens.

The several specimens had lost considerably in weight during the interval of their preparation from the beam and the date of test.

Tension specimen b, after the first series of readings, was entirely relieved of load and was allowed to rest for two hours.

Between the two series of readings, compression specimen  $f_2$  remained under the load of 50,000 lbs. for sixteen hours, the final reading varying from .01117 to .01172.

i	Ĩ	Tension Tests.				Con	Compression Tests.				Shea	Shearing Tests.	ž	
Spec.	Coefficients of per s	Coefficients of elasticity in lis. per sq. in.	Tensile Sp. wt.	Sp. wt. 11 lbs.	Dett	Coefficients of elasticity In Ibs. Compress Sp. wt.	lasticity in lbs. q. in.	Compres-	Sp. wt. in ths		Shearing	Sp. wt.		Shearing
	Forward.	Return.	sq. in,	eub. ft.		Forward.	Return,	strengtn in lbs. per cub. ft. sq. in.	per cub. ft.	. bec	Spec. In lbs. per In trs. Spec. sq. in. of per fats.	per ft.	Shee	in lba pe sq. in. o rounds.
	1,626,330 1,843,820 { 1,843,170 {	1.563,510	9,777 10,021		16	1,945 550	1,912 950 1,690 900	3978 2850	32.75		321.90 105.40		2 2	552.95 636.74
	1,445,900		5,772		5.4 ~	1,455,090 1,571,990	029,611		26.461	1	204.81	26.534	8 H	689.113 557.15
	2,245,130 1.652,480	2,295,170	11,902		~~~	1.560,010	1,535,620		27-102	* 0		26.672		
								*7.67	34.10	2.0	342.80	26.581		
										L 60	410.45	26.540		
										*	352.98	27.513		



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