

Thus taking 960 as the unit theoretical load :—

Ratio	=	1	2	3
Theoretical load	=	960	1920	2880
Actual load	=	960	1970	2940
Difference	=	0	50	60
Per cent of difference	=	0%	2.5%	2%

The first two results given - 600 and 740—are the results of hand-driven screws where insufficient pressure had been applied to prevent the wood from lifting, thus reducing the strength from a theoretical maximum of 930 lbs. to an actual load of 740 lbs., a difference of 190 lbs., or a loss of 24%.

Thus taking 930 as the unit theoretical load :

Ratio	=	1	2	3
Theoretical load	=	930	1860	2790
Actual load	=	740	1870	2744
Difference	=	190	10	46
% of difference	=	24 % loss	.6 % gain	1.7 % loss

This serves to show the extreme importance of the exercise of care in driving the screws, especially where the depth is not great.

Table II.—In the first division of the table the rate of loading varied between 21 seconds and 130 seconds, and the greatest deviations from the mean load were :

— 350 and + 200

and the least were : — 20 and + 10.

In the second division of the Table with a practically uniform rate of loading varying between 15 seconds and 18 seconds the greatest deviations from the mean load were :

— 246 and + 354

and the least were : — 16 and + 54.

Throughout the tests the rate of loading did not vary more than from 10 to 25 seconds, and the above shows that a variation of as great as 109 seconds did not appreciably affect the maximum loads. So that within the limits possible, which are small, the time does not at all affect the results given.

Table III.—1. In Pine, screws in the *smaller hole* gave from 2% to 14% greater maximum strength than the same screws in the *larger sized hole*.

2. In Oak, screws in the *larger hole* gave from 4% to 15% greater maximum strength than the same screws in the *smaller sized holes*.