

PROPER SIZE STRINGERS FOR GIVEN WHEEL LOADS. 69

Table giving proper size of wooden stringers, for supporting different assumed wheel-loads, supposed to be concentrated in the middle of a panel, the timber being strained to 1200 lbs. per square inch.

LOADS ON ONE WHEEL.

Span or panel-length.	500 lbs.	1000 lbs.	1500 lbs.	2000 lbs.	2500 lbs.
10 feet.	2 × 8	3 × 8	3 × 9	3 × 9	3 × 10
12 "	2 × 8	3 × 8	3 × 10	3 × 12	4 × 12
14 "	2 × 9	3 × 9	3 × 11	3½ × 12	3 × 13
18 "	2 × 10	3 × 10	3 × 12	3 × 14	4 × 14
20 "	3 × 10	3 × 12	4 × 12	4 × 14	4 × 16

Iron stringers are simply rolled I beams, of proper strength for the wheel loads, and may be had of any depth from four inches (weighing ten pounds per foot), upward. Where they rest upon the floor-girders, they should be secured by means of bolts, clips, or brackets.

* Table giving proper size of iron stringers, for supporting different assumed wheel-loads, supposed to be concentrated in the middle of a panel, the iron being strained not over 12,000 lbs. per square inch.

LOADS ON ONE WHEEL.

Span or panel-length.	500 lbs.	1000 lbs.	1500 lbs.	2000 lbs.	2500 lbs.
10 ft.	4" 6 lbs. p.ft.	4" 10 lbs. p.ft.	4" 10 lbs. p.ft.	5" 10 lbs. p.ft.	5" 12 lbs. p.ft.
12 "	4" 6 " "	4" 10 " "	4" 10 " "	5" 12 " "	6" 13 " "
15 "	5" 10 " "	5" 10 " "	5" 10 " "	6" 13 " "	6" 13 " "
18 "	6" 13 " "	6" 13 " "	6" 13 " "	7" 18 " "	7" 18 " "
20 "	7" 18 " "	7" 18 " "	7" 18 " "	7" 18 " "	7" 18 " "

FLOORING.—The flooring of common road-bridges usu-

* The sizes of beams recommended in the table are the nearest mercantile sizes that fulfil the requirements. This in some cases necessitates the use of beams in excess of that called for by the loads. It was thought best to use none lighter than the seven-inch beam for the twenty-foot panel-lengths, since shallower beams would be apt to spring to an undesirable extent.