

designed by John S. Valentine, Civil Engineer, suitable to his patent guide-wheel, is as follows:—

2640 Cubic feet Red Beech in rails, 5 x 5 in the clear; 6 x 6 including waste.

1320 Cubic feet longitudinal chair of White Pine, $2\frac{1}{2}$ x $2\frac{1}{2}$, or 3 x 3 with waste.

4436 Cubic feet longitudinal sleepers, $5\frac{1}{2}$ inches by 11 inches, White or Yellow Pine.

587 Tie-struts, 9 feet apart, 5 inches by 4 inches by 5 feet, 4 feet $8\frac{1}{2}$ inches gauge, 391 Cubic feet.

587 Transverse sleepers, 6 inches by 9 inches by 10 feet, 2199 Cubic feet.

3520 Iron bolts, with nuts.

1174 Wooden keys to transverse sleepers.

The advantages, then, and superiority of Railways upon this system, may be summed up thus:—As rendering unnecessary heavy embankments, fillings, cuttings, and tunnels;—as the means of securing cheap fares;—as greatly reducing the annual maintenance;—as greatly diminishing the cost of construction to formation level, by admitting sharper curves and steeper gradients;—as greatly lessening noise, and producing greater safety, ease and comfort in travelling;—and as preventing the possibility of accidents by the breaking of wheels or axles, or by the engine running off the rail.

TORONTO, February 15, 1853.