

Whale oil and tallow have therefore an excellent effect, particularly the former.

The following experiments were made by Mr. Chapman on the elasticity of ropes of different kinds, when strained with seven-eighths of their breaking stress :

	Original length.	Length when strained.
	Inches.	Inches.
Registered primary strands	24	24 $\frac{1}{4}$ to 25
Registered shroud laid ropes	24	26 to 26 $\frac{1}{2}$
Common made shroud laid rope	24	27 $\frac{1}{2}$ to 28
Registered cable laid rope	24	27 to 27 $\frac{1}{2}$

The three kinds of rope last mentioned stretched on an average 1 inch in 24 with a fifth of their breaking stress, which is from $\frac{1}{5}$ to $\frac{2}{5}$ lb. of the whole stretching of the registered shroud laid ropes, but only from $\frac{2}{7}$ ths to $\frac{1}{4}$ th of the stretching of the common made shroud ropes.

In May, 1805, Sir Joseph Banks, being anxious to try teak tar for ropes, two three-inch ropes were made of the same yarns, one with teak tar, and the other with common tar. They were then placed in the same storehouse, and were broken Sept. 28th, 1807. Common tarred rope broke with 3,848 lbs.; That made with teak tar broke with 5,980 lbs. The common tarred rope being only about *two-thirds* the strength of the other.