

Wrought-iron, under same conditions, corrodes at the rate of $\frac{1}{430}$ of an inch per year..... or 1 inch in 430 years.

Steel, unprotected and submerged in sea-water, corrodes at the rate of $\frac{1}{130}$ of an inch per year, or 1 inch in 130 years.

Wrought-iron, under same conditions, corrodes at the rate of $\frac{1}{310}$ of an inch per year..... or 1 inch in 310 years.

Steel, unprotected and submerged in fresh water, corrodes at the rate of $\frac{1}{600}$ of an inch per year. or 1 inch in 600 years.

Wrought-iron, under same conditions, corrodes at the rate of $\frac{1}{700}$ of an inch per year..... or 1 inch in 700 years.

Wrought-iron in an overhead bridge, subjected to coal-smoke from locomotives, corroded in 25 years from 39.5 per cent. or 1.8 per cent. per year to 100 per cent., or 4 per cent. per year, some of the members being entirely eaten away.

Unstrained members corrode more quickly than strained members. Shaded parts will corrode more slowly than parts exposed directly to the sun's rays.

Real iron-rust does not promote further rusting because of any chemical influence on the iron, but being a spongy mass, it retains in its pores 24 per cent. of water deposited as rain or dew. It does not, therefore, prevent, but rather encourages rusting, and in this way has a physically injurious effect upon iron. Corrosion accelerates with time, the second year's being 50 per cent. greater than the first.

LINSEED OIL.

In paint, oil is king; any finely ground pigment, inert toward the metal and oil, will last until the oil decays and wastes away, and against this decay and waste there is no remedy. The raw oil is obtained by both cold and hot pressure from linseed, or the seed of the flax plant, *Linum*