

of such properly designed metal bridges as have lately been constructed throughout the country will not greatly exceed fifty years. Where corrosion is particularly active, as at the bridge of which I have spoken, the life of the structure must be much shorter, probably not over 35 years.

An English oxide of iron paint much used in this country contains 48 per cent. of iron oxide and 52 per cent. of insoluble material, and some American oxide of iron paints contain as little as 33 per cent. of iron oxide and 60 per cent. of silica. We have in Canada unlimited quantities of iron ore, which requires no preparation except grinding. Why should we then continue to import that with which nature has so liberally endowed us, and why should we continue to use unsuitable paints on locomotives, stationary engines, cars, roofs, bridges, freight and store-houses, when good iron oxide paints are cheaper and more lasting?

The company which will produce iron oxide paint from Canadian ore, as good as the best, push its sale, and show the people its advantages for works of this kind, will benefit both themselves and those to whom they sell. Hundreds of iron ore deposits exist in Canada, some affording 72.4 per cent. metallic iron, and several extensive graphite deposits, some of which produce 50 per cent. of pure black lead, while the natural product of low specific gravity for mixing with the iron ore powder can be supplied pure in any desired quantity.

For part of the information contained in the foregoing article, I am indebted to Prof. J. Spennrath's prize essay on "Protective Coverings for Iron," 1896; J. Newman's "Corrosion and Fouling," 1896, and to several articles in engineering periodicals by such high authorities as W. P. Wood, E. Gerber, W. G. Berg, A. H. Sabin, Samuel Wallis, J. H. Stanwood, and J. E. Greiner.