

cause, the sun's energy, is so enormously abundant, that the loss of energy in creating this cycle of rising and falling water is inappreciable. The winds and the tides are also perpetual and involve no appreciable loss of energy, but no method has as yet been found of using them to advantage in the transmission of power. Possibly the invention of a suitable storage battery will bring the varying forces of the winds into use as a source of power to be transmitted by electricity; and possibly the same may be done in regard to the tides; but as yet this has not been accomplished. Coal, oil, gas, peat, and wood as producers of steam, are all fundamentally wasteful. As the power is created these substances pass away in gases and vapors which in turn are absorbed by the soil and vegetation and may again produce coal, oil, peat, and wood, but only after the lapse of millions of years; so that as the matter stands today water power is the only source of energy which does not involve destruction and waste. It has been well termed "white coal." Its use gives no form of noxious vapors, no noise, no smoke, no cinders. It is pre-eminently the power of a century *de luxe*. And as a demonstration of the control of gigantic forces by the brain of puny man it has no rival. Electricians can give you no adequate idea of what electricity is, but they can tell you with great accuracy what it does and can do, and how it can be regulated and controlled. It is a spectacle second only to the Falls themselves as a mighty manifestation of the works of God upon earth, to walk through one of the great power houses at Niagara, and in profound silence, with only a half dozen operators in sight, watch the wires and transformers and recording instruments through which is invisibly and noiselessly passing a titanic force on which depend the light, the transportation and many of the industries of hundreds of thousands of people, scores of miles away.

There are certain things in the industrial and chemical world which can only be done by cheap electricity. One of them is the manufacture of aluminum, a metal which was unknown outside of the chemist's laboratory twenty years ago, and which now is manufactured for a thousand