

Iron and Its Uses.



VERY department of service furnishes the student of nature with a new proof of the principle that the Creator is all provident as well as all powerful. Botany, the primary science in our schools and colleges, illustrates the wonderful manner in which vegetation springs, nourishes, and matures; how every plant from the least stem to the towering oak is sprung from the tiniest of seeds, nourished with the rich moistures of mother earth, heated with the sun's rays, and cooled with the gentle rains from heaven; how the plant is the sole support of the animal life, the study of the latter being termed zoology, through which, and by which and in which, we see the hand of providence supplying man with the most essential properties of his existence.

Next to the study of those elements necessary to the functions of the animal life comes mineralogy, the opening up of the earth's crust, inclosed in which the All-providing One has placed innumerable ores to supply the wants of man. These ores are found in great abundance all over the globe, but one of them found in the greatest abundance is iron, which, using the expression in the best sense of the term, is indispensable to the wants of man. But God so destined it, that man should from perseverance, learn to extract from their abodes the different ores, mould them into their various forms, and apply them to their different uses; and indeed we may assert without hesitation, that the advancement of nations from barbarism to civilization may be marked by their abilities in working the iron ore. Wherever the art of iron-making has reached its greatest perfection, may be expected to be found the most enlightened nation in existence, while on the contrary the sign of the uncivilized tribe is its pompous display of gold and jewels.

Terrestrial iron exists in various forms. Loose blocks of metallic iron are discovered near the surface in many countries, and in some counties as in Russia and America it exists in large veins. The most abundant form, however, is oxide iron either in a pure state as haematite or red oxide, or combined with carbonic acid, constituting clay iron stone, from which the iron of commerce is principally extracted. A knowledge of the distri-