

eries in electrical science would be to give the history of electricity. So rapid has been the development of this branch of science, especially in its practical applications to telegraphy and electric lighting that a new profession has been created—that of telegraph engineering. The name of Sir William Thomson is perhaps more associated in our minds with the great advances made in this subject than that of any other philosopher, and well may Glasgow be proud of having such a man to adorn its class-rooms. No physical laboratory can be said to be furnished unless it be supplied with the fruits of his genius.

But whilst the great scientific leaders are ever astounding us with new discoveries and new applications of scientific principles, there are scientific teachers who do no less important work, viz., in spreading the knowledge of science amongst the masses of mankind. In this important work scientific men are not behind the modern times. This is easily seen in the great improvement which has taken place in modern textbooks and subjects taught in schools. With your permission I shall say a few words as to the progress made in a country that I have recently been connected with for several years, and to you, perhaps, a country yet little known—I mean Japan. It is not thirty years since Japan was to all nations, except the Dutch, a practically unknown country. Even yet we find such errors as these amongst educated people; that Japan is a hot country, that it is dependent on China, or forms part of that great empire of the East, that its people are barbarians or semi-civilized, etc. On the contrary the winters in many parts of Japan are as cold, though not nearly so long, as in some parts of Canada; instead of being dependent on China it boasts in its history of having conquered the Chinese and made Corea a depend-

ency, and its people, far from being barbarians, were civilized when our ancestors were little better than savages, and at the present day might be a model of politeness to the most polished nations of Europe. Their works of art, I need not add, have a world-wide reputation, and have had a very great influence in art education at the present day. For several centuries the rulers of this interesting country adopted a policy of exclusiveness: they believed that all other men, except their neighbours the Chinese, were nothing but ignorant savages. It fell to our southern cousins, under the leadership of Commodore Perry, to teach this nation how fatal in many respects was this policy of its rulers. Nothing impressed the proud defenders of that land of the rising sun more than that magic power which drove Perry's ships of war out and in their bays. (I use the adjective magic, for all the European inventions of steam-engines, telegraphs, photography, etc., when first seen by the Japanese, were thought to be magic, and probably confirmed in their minds our close relationship to His Majesty of the Nether World. "Red-haired devil" was a common epithet of contempt long applied to the foreigner.) They soon saw that to hold their own with other nations they must learn the sciences of the West, and to this end, after a period of great disturbance, the Government engaged men of different nations to teach them the branches of scientific knowledge in which each was supposed to excel. French officers were engaged to teach military tactics, Germans to teach medicine, Englishmen to teach naval tactics, engineering, and agriculture, and Americans among other subjects, to show them how best to colonize their most northerly Island. Colleges were established in the capital Tokio for this purpose. It will suffice in the meantime to give