principle of hit or miss, except perhaps in the gadget class of invention, is not applicable, and the complete inventor is a development of the scientific researcher". But to such a man, the suggestion that he would find it worth while studying Max Planck, Einstein and Eddington would come rather late, while that suggestion, even if accepted, would have no utility to the 'gadget' producer. The high hopes raised by the receipt of a treatise with the title "The Science of Invention" remain unfulfilled by Mr. Marshall's series. An authoritative examination of the position of invention in the modern State is still needed. In such an examination the commercial aspect may well prove to be insignificant, although research by one man or one set of workers may have to be restricted to the material inventions, leaving such things as modern systems of government, the most striking development of man's inventive faculty, to the historian or the alienist. From a calm investigation of the uses of material advances it may be found that they follow social changes and are called forth by them: but research is necessary to discover the vital facts of modern invention and, in Great Britain at any rate, there is little evidence that such research is being carried out. Is it fantastic to believe that if it is ever adequately made, we shall have general consent to the idea of complete control by the State of the inventive faculties of its members?

Viability of Plant Structures

THE question of the length of the period of viability in seeds and other plant organisms is constantly cropping up, and, although a great deal has been written about it, there is still much to be discovered with regard to the actual length of time seeds and spores can remain viable. Reference was made to this problem in NATURE of May 2, 1931, p. 675, and an article on the subject was published in the *Kew Bulletin* of 1933, p. 257. In that article, all the cases of longevity that have been definitely authenticated were brought together. Possibly the oldest case is that of *Nelumbo* (the Japanese lotus) recorded by Ohga in the *Botanical Magazine* of Tokyo, 1923. Seeds of *Nelumbo nucifera* were found in a peat bed buried under 2 ft. of loess in Southern Manchuria. The seeds all germinated and it is estimated that they were at least 120 years old and may have been as much as 400 years. It is well known, of course, that poppy seeds and charlock can retain their viability for very long periods, but for how long one cannot say definitely. According to an announcement in *The Times* of August 19, M. P. N. Kaptereff has succeeded in reviving plant organisms which have lain in the earth for thousands of years. It appears from this account that it is only spores which have shown signs of life, and it seems quite possible that spores of some of the lowly algæ could have survived in a frozen condition for a very long time. From the account it appears that blue-green algæ may be some of the plants which have developed —possibly some of the unicellular green algæ also. As to the grass-like plants which are mentioned, they might well have retained their general appearance in a frozen condition for a very long time, as the ice would preserve the form perfectly well. One would not expect them to have any life in them and this does not appear to have been the case.

Native View of Baganda Institutions

AN account by an African of his own institutions must normally, though not invariably, have an exceptional value for the ethnographer. Being as a rule a spontaneous production, it avoids the great danger of the usual method of inquiry, in which there is the risk of biasing the sources of information. Sir Apolo Kagwa, the *Katikiro* of Uganda, who produced in 1918 an account of Baganda history and institutions in his native language, was exceptionally well qualified for this undertaking. A man of considerable intellectual power, he had been associated with the royal household from his early youth, and when in 1897 the young Daudi Chwa, an infant, one year and six months old, was appointed king on the abdication and flight to German East Africa of his father, Mwanga, Apolo was made regent and prime minister. He thus had a personal and intimate knowledge of the critical times which led up to the intervention of the British forces in Uganda and the institution of a protectorate. His authority on State affairs and ritual is beyond question. One of the most valuable records he has preserved is that of the officers and queens of each ruler from the beginning of the line with the semi-legendary founder Kintu. The Rev. J. Roscoe, when collecting information for his book "The Baganda", derived a great deal of his material from the *Katikiro*; and, in fact, Sir Apolo's book, which is an invaluable, and indeed a necessary, supplement to Roscoe, was written to expand and correct what he considered to be open to criticism in the work of the latter. The fact that Sir Apolo wrote in Luganda has proved a drawback; but this has now been remedied in a translation by Ernest B. Kalibala, edited by May Mandelbaum (Edel) (*Columbia University Contributions to Anthropology*, 22, 199. 4 dollars). For the convenience of students the mere repetitions of Roscoe's information are omitted, but references to "The Baganda" are given here as well as where Roscoe is supplemented or corrected.

Safety in Mines Research

As in past years, the Fourteenth Annual Report of the Safety in Mines Research Board includes a report of the Health Advisory Committee, which forms in fact Part 4 of the Report, the previous parts being Part 1, General; Part 2, Instruction; and Part 3, Progress of Safety Researches. The Report, of course, begins with an expression of regret on the death of Dr. J. S. Haldane, who "had been a member of the Board since 1923"; there is not a miner who will not re-echo the last sentence of the first paragraph in reference to Dr. Haldane—"His death is a severe loss to the whole mining community"; whilst it also refers to the retirement of Prof. S. M. Dixon, who, as is well known, has rendered much valuable service in connexion with wire ropes used in mining. There is further a number of appendixes to the Report, one of which deals with protective equipment, and it is interesting to note that, generally