mercury pump which made possible the evacuation of Swan's and Edison's electric glow lamps, Crookes's radiometer and Rontgen's apparatus, and for his improvements in explosives. In 1871 he took out patents for a class of explosives which were non-explosive during manufacture, storage and transport, but for want of encouragement he allowed the patents to lapse. His explosive 'rack-a-rock' was used in 1885 for removing the Flood Rock Reef which obstructed the entrance to New York Harbour at Hell Gate, some 300,000 lb. of the explosive being used. He also devised a U-tube for the determination of the density of liquids, introduced the use of a finely divided spray of water in the place of steam in sulphuric acid chambers and was the first to direct attention to the value of picric acid as an explosive.

New Belgian Ascent into the Stratosphere

DR. MAX COSYNS is to be warmly congratulated on his successful ascent into the stratosphere on August 18. The disaster of the two previous ascents had not deterred the chief actors in this from going forward with their preparations, for it will be remembered that the American ascent came to grief only so recently as July 28. Dr. Cosyns was accompanied on this ascent by M. van der Elst, and the project was under the auspices of the Belgian Fonds National de la Recherche Scientifique which gave the balloon its name *F.N.R.S.* It had a capacity of about 14,000 cu. metres and was provided with an aluminium gondola with special means of rapid exit. The motive of the flight was the investigation of the directive tendency of the cosmic radiation, and as a good landing has been made it is to be hoped that the records are safe. The ascent was made from Hour-Havenne in the valley of the Lesse in Belgian Luxembourg at 6.10 a.m. on Saturday in perfect weather conditions, and the descent at Zenavlje in Yugoslavia at 9.30 p.m. on the same day. The height reached, as reported in the daily newspapers, was about 10 miles. Though this does not constitute a record for height, the recent aeroplane work of Blackett and Gilbert in Great Britain at comparatively low altitudes shows the value of such data as may be obtained in this manner in resolving the problem of the directive tendency of the cosmic radiation. A further point of interest is the fact that the balloon covered a distance of about 1,000 miles in a general south-easterly direction during a period of 15 hours. This would indicate a very high wind velocity at high altitudes.

Cambridge Lake Rudolf Rift Valley Expedition

THIS expedition has now been in the field some eight months, and we regret to report that on August 14 two members—Dr. W. S. Dyson, naturalist, and Mr. W. H. D. Martin, surveyor—are reported missing on South Island. There are three uninhabited volcanic islands in the lake: Central Island, studied by the Cambridge Expedition of 1930–31, North Island, visited in 1932 and South (Hohnel) Island, which has remained unknown since it was roughly mapped from the mainland during the original exploratory journey by Teleki and von Höhnel in 1885. Its study was a particular object of this year's expedition, which has a folding boat and outboard motor for the purpose. The two men crossed the five miles of open water to the island about August 1, and after a fortnight in which prearranged signals were not received on the mainland, Mr. V. E. Fuchs, leader of the expedition, asked for Government assistance, if possible by aeroplane, to aid in the search. If the missing men are on the island they should have little difficulty in obtaining subsistence on fish; the water is potable though unpleasantly alkaline. Earlier in the year the expedition, which is mainly geological, proceeded up the west side of the lake with the view of going to the Omo River and excavating important bone beds *en route*. The Malembe triangle, where Kenya borders on the Sudan and Abyssinia, is somewhat unsettled and an armed guard had to be taken north from Lokitaung; this impeded the work, but valuable collections and surveys have been made. After returning south, the expedition moved to the south-east corner of the lake to study the eastern scarp of the rift valley, where high-level beaches were reported by the 1931 expedition. It was here that the unfortunate incident occurred.

Gift to the University of Birmingham

AT the meeting of the Court of Governors of the University of Birmingham in February, reference was made to the urgent need of further accommodation for the Department of Chemistry, but it was pointed out that the financial commitments incurred in the building of the new Medical School were such as to make the desired addition to the chemistry building impossible for the present. The difficulty has now been solved by the generous gift of £45,000 by Mr. A. E. Hills, a Birmingham tube manufacturer, for the specific purpose of erecting an additional block of buildings for the Department of Chemistry. In his letter to the Pro-Chancellor, Mr. Hills says: "For some time past I have had in my mind the desire to assist the higher education of those likely to be engaged in industry in Birmingham and the Midlands, with which I have been closely connected in my business life. I have come to the conclusion that I can best do so by helping the University in one of its scientific departments which is in need of extension. . . . It seems to me that the department most overcrowded and badly housed is that of Chemistry. Much of its work is being carried on in wooden huts which are inadequate and are becoming dangerous. The present Chemistry block is insufficient for the increasing number of students who come to it for the training in chemistry which forms a necessary part in practically all scientific careers, and also for those engaged in post-graduate research." It is understood that the new block will fill the gap between the existing chemistry and geological blocks, thus completing the western part of the architect's original scheme for the group of buildings.

Edinburgh Geological Society

BY the end of this year, the Edinburgh Geological Society will have been in existence for one hundred

years. In order to take advantage of the presence in Scotland of many foreign and overseas geologists who will be attending the Aberdeen meeting of the British Association, it has been decided to hold the centenary celebrations early in September. Invitations have been sent to learned societies at home and abroad, and a large number of delegates will take part with the fellows of the Society in various functions. On Monday, September 3, the delegates from kindred societies will be received in the buildings of the University of Edinburgh, where they will be welcomed by the president, Sir John Flett, in the name of the Society, and by Sir Thomas Holland, in the name of the University. During the afternoon, visits will be paid to the Royal Scottish Museum and the offices of the Scottish branch of H.M. Geological Survey. In the evening, the Society and its visitors will be the guests of the Lord Provost and Town Council of Edinburgh at a reception in the College of Art. Tuesday morning will be devoted to hearing short addresses by eminent geologists in the new Geological Department of the University. The party after lunch will make a tour of various places of geological interest in and around Edinburgh. A dinner on Tuesday evening given by the Society to the visiting representatives will bring the functions to a close.

Earthquake in Scotland

AN earthquake of unusual strength occurred in Ross-shire and the surrounding counties on August 16 at about 2.15 a.m. (G.M.T.). The early accounts are insufficient to determine its intensity and disturbed area, but it seems to have reached the degree 7 (Rossi-Forel scale) and to have been felt over at least 10,000 sq. miles, for it was observed at such places as Glenshiel in west Ross-shire and Pitlochry in Perthshire. Its strength is also evident from the fact that it was recorded at West Bromwich, where, at about 2.25 a.m., it caused the pointer of the seismograph to move an eighth of an inch. The principal earthquake zone in the north of Scotland is the portion of the Great Glen fault that lies between Inverness and Loch Ness. As most of the places from which reports come cluster in the neighbourhood of Dingwall, it is possible that the origin may lie in that district

Element 93: A Correction

X-RAY spectroscopic analysis has failed to confirm the presence of any new element in pitchblende from Joachimsthal. Dr. O. Koblic has consequently withdrawn his claim to the discovery of an element of atomic number 93 in this uranium ore, concerning which an announcement was made in NATURE of July 14, p. 55. He now states that the substances he supposed to be the silver and thallium salts of an acid, $H(93)O_4$, were sent to Prof. V. Dolejsek (Prague) and to Drs. I. and W. Noddack (Berlin) for X-ray spectrum examination. No lines corresponding to an element of atomic number were obtained but the presence of tungsten was unmistakable. Tungsten was also detected afterwards by chemical means in Dr. Koblic's preparations. The erroneous atomic weight determination arose from the assumption that his silver salt was $Ag(93)O_4$ whereas it was actually silver tungstate. The unusual behaviour of tungstates in acid media is suggested as an explanation of the reactions described by Dr. Koblic (*Chemický Obzor*, **9**, 129; 1934) which he attributed to the presence of a new element. This withdrawal has, of course, no reference to the earlier work of Prof. E. Fermi dealing with the 'synthesis' of an element of higher atomic number than uranium (NATURE, June 16, p. 898).

An International Air Police Force

LORD DAVIES continues his vigorous campaign for an international police force in a new booklet entitled "Force and the Future" which deserves notice as a shorter and more incisive statement of the argument of his larger work, which we have already noticed in review. He also brings it up to date by arraigning the Government on several counts for holding up the League of Nations and failing to provide it with the means of enforcing its will. The discussion of these is clearly out of place in these columns, but it is germane to science to point out that, as time goes on, opinion seems definitely to be settling on the air as the sphere of action in which international co-operation is most appropriate, feasible and urgent. A well-thought-out plan for a European air police has lately been submitted to the League of Nations Union by Rear-Adm. R. N. Lawson and should be carefully considered by the government experts and everyone who is anxious to move in the direction of greater security and union among the nations. If not immediately practicable in the form of police, it clearly is so in the form of greater facility and safety in transport and communication. Started in this way, as the International Postal Union was in the middle of last century, a union or bureau associated with the League of Nations would secure a much more efficient and economical way of utilising the air for peaceful purposes, and indirectly sidetrack the horrors of bombing from the air which Lord Davies and many others have held up to us as the inevitable result of man's latest conquest. Were the air used habitually for its obvious purpose of bringing the nations easily together, it would soon seem as mad and monstrous to use it for destruction as for the barber to cut your throat when you sit down to be shaved. While man has free will, one cannot absolutely rule out the possibility of the wildest actions, but one can make them, by controlling habits, improbable to the highest degree.

Community Education and Training

IN a paper on "The United States United Communities Bill from the Point of View of India's Educational Problems" read before the ninth All India Educational Conference in December, 1933, Capt. J. W. Petavel, formerly lecturer on the poverty problem in the University of Calcutta, explains that the United Communities Bill aims at providing for