

is provided that it shall go into a separate fund from which may be paid the expenses of the professor in visiting Geneva, in order to keep in touch with the International Labour Office, or in investigating at first hand industrial relations in America. The new chair is to be called the Montague Burton Professorship of Industrial Relations and will be primarily assigned to the Faculty of Economics and Politics.

OXFORD.—At a meeting of Congregation held on Nov. 11, a decree was passed establishing regulations for the Joint Coal Mining Diploma of the Universities of Oxford and Birmingham. The decree provides that candidates for the diploma who are graduates of the University of Oxford must have obtained a class in the final honour school of engineering science, and must have attained a satisfactory standard in geology as a special subject. They must also present certificates of at least four months' practical experience in mining, and must attend the diploma course in mining at the University of Birmingham, extending over one session.

On Nov. 13, Prof. Pannekoek, of the University of Amsterdam, delivered, on behalf of Prof. Milne, a lecture on "Researches in the Intensities of Absorption Lines in Solar and Stellar Spectra". By means of certain formulæ and substitutions, which he employed with great fluency and readiness, he showed how the investigation of these intensities is capable of throwing light on the chemical constitution of solar and stellar atmospheres. Certain discrepancies between the calculated and observed results require further research. They may possibly indicate (as suggested by Prof. Milne) that some physical data need reconsideration in the light of astrophysics.

NOTICE is given by the Institution of Chemical Engineers, that application forms, particulars of the 1931 associate-membership examination of the Institution, and a memorandum on "The Training of a Chemical Engineer" are obtainable from the Hon. Registrar, Institution of Chemical Engineers, Abbey House, Westminster, S.W.1. The latest date for the return of application forms is Dec. 22.

Historic Natural Events.

Nov. 24, 1639. *Transit of Venus*.—The rare occurrence of a transit of the planet Venus across the sun's disc was first predicted and then observed on this date (old reckoning) by Jeremiah Horrocks and also by his friend Wm. Crabtree to whom he had communicated his prediction. "I then beheld a most agreeable spectacle, the object of my sanguine wishes, a spot of unusual magnitude and of a perfectly circular shape, which had already fully entered upon the sun's disc on the left, so that the limbs of the Sun and Venus precisely coincided, forming an angle of contact. Not doubting that this was really the shadow of the planet, I immediately applied myself sedulously to observe it." Only four other such transits have been seen, those of 1761, 1769, 1874, and 1882. The next is due in 2004.

Nov. 23-24, 1926. *Rock Fall at Roquebillière*.—Following heavy rains, a crevasse opened on the steep flank of the Maritime Alps above Roquebillière on Nov. 22. Suddenly on the night of Nov. 23-24 a great mass of rock broke away and fell on the village, destroying a dozen houses and killing 25 persons. The catastrophe was due to the saturation of the ground above a sloping bed of clay, down which the whole mass slipped.

Nov. 26-27, 1703. *Defoe's Great Storm*.—On the night of Nov. 26-27 the southern half of England was visited by a storm unequalled for at least 300 years and possibly for far longer. Daniel Defoe, the author of "Robinson Crusoe", compiled a detailed and graphic account of the disaster, with the help of correspondents in all parts of the country. The greatest intensity of the storm was experienced to the south of a line from Pembroke to Yarmouth, and here the damage was so great that masses of lead from the roofs were rolled up and carried considerable distances. Houses were blown down, unroofed, or otherwise damaged, and the cost of building materials rose to three or four times the normal level. Eddy-stone lighthouse was destroyed, with Winstanley, its designer; and according to Defoe's account there was great loss of shipping. The loss was greatest on the south and south-east coasts of England and even in the Port of London many ships were driven aground. On the shores of the Severn the damage was accentuated by an abnormally high tide. At Bristol the water rose eight feet above the previous highest level. In south-west England the winds began from south-west and veered to north-west; in south-east England they began from south-south-west and veered to west. There were several interesting peculiarities; the storm was generally accompanied by lightning, though the wind drowned the noise of the thunder. A 'spout' or tornado was observed at 4 P.M. on Nov. 26 near Oxford, and possibly elsewhere; and among the buildings of London the wind produced remarkable eddies, the damage to the roofs taking place on the eastern or leeward sides of the houses. In Kent the trees and grass were covered by a deposit of salt 25 miles from the sea. On Nov. 28 there was a very high tide in the Thames, which added to the confusion by flooding riverside London. The storm ravaged Holland on Nov. 27, struck Hanover and Copenhagen on the night of Nov. 27-28, while severe gales which may have been due to the same storm were afterwards reported from the Baltic, Sweden, Finland, and northern Russia. These led Defoe to conjecture that the storm, originating in North America, may have travelled entirely round the globe, losing force in the Arctic and dying out near its birthplace.

Nov. 26-27, 1898. "*Portland Storm*".—A violent storm traversed the coast of New England, accompanied by a heavy fall of snow. One hundred and forty-two ships were wrecked, with a loss of 455 lives, including the steamship *Portland*, which left Boston in spite of a storm-warning from the Weather Bureau, and foundered off Cape Cod, this disaster costing 175 lives.

Nov. 26-29, 1921. *Glazed Frost*.—During a period of strong northerly and north-easterly winds, snow and freezing rain fell steadily for more than three days in Massachusetts, forming thick coatings of ice on all trees and telegraph wires. Wires one quarter of an inch in diameter carried ice two inches in thickness, and weighed 1½ lb. per foot, and whole rows of telegraph and trolley-car poles were snapped off at the base, while almost every tree lost at least one good-sized branch. Communications and electric supply were interrupted for days, several people were injured and a number of horses killed.

Nov. 27, 1909. *Hurricane*.—A violent hurricane struck the Cocos Islands (Keeling Group) soon after 7.30 P.M.; the wind and high seas did considerable damage. At 8.15 P.M. cable communication was interrupted owing to the vibration of the instruments. The centre of the storm passed over about 10 P.M., the barometer reading being 947 mb. (27.96 in.).