

KINEMATOGRAPHY IN NATURAL COLOURS.

AT the inauguration, on May 1, of Urbanora House, where the Charles Urban Trading Co. make kinematograph films, Mr. G. Albert Smith gave a demonstration of the first examples that he has prepared of his system of animated photography in natural colours. The results were excellent, the colours being bright and clean, and so far as one could judge from the drapery, flowers, and flesh tints, they were very good copies of the originals. The method which Mr. Smith has practically perfected allows of the use of the ordinary bioscope and projection apparatus and the ordinary film. The film itself is not coloured at all, but consists, as in other methods, of colour records, the colour being supplied by stained films behind it.

The three-colour method of projection, of which Mr. Ives was the chief pioneer from a practical point of view, has been described in this Journal, and consists, shortly, in photographing the redness, greenness, and blueness of the subject, and then, by means of colour screens placed behind these photographs and three projection lanterns, combining the coloured images on the screen. Kinematography with three lanterns would offer great, if not insuperable, difficulties, besides requiring new and very complicated apparatus. Mr. Smith therefore makes his colour records alternately on the same strip of film by fixing a disc that carries the necessary colour screens in front of the film and causing it to rotate synchronously with it. As seen on the sheet, the alternating colours combine perfectly. To simplify the matter further, Mr. Smith has done away with the blue screen altogether, and broadened the spectrum bands transmitted by the red and green screens, the latter including some blue. As the blue in three-colour work is always a dark colour, its elimination, together with the readjustment of the other two colours, is justified in the result, whether it is theoretically correct or not. The method thus simplified left the difficulty of the comparative insensitiveness to red of ordinary films. The method of rendering the film so sensitive to red that the red image may be photographed at the necessary speed Mr. Smith does not describe, but apparently he used a bathing process.

Thus it has been demonstrated that it is now possible to represent colour and movement at the same time in a thoroughly practical manner, and with comparatively simple apparatus. C. J.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

CAMBRIDGE.—The date of the installation of the Chancellor in the Senate House is fixed for Wednesday, June 17.

Graces will be offered on Thursday, May 14, recommending the establishment of the proposed new professorship of biology, and gratefully accepting the proposal of a member of the University to contribute the sum of 300*l.* per annum for five years towards the stipend of the professor, this offer to be increased to 400*l.* per annum for any portion of the five years during which the professor may be holding a professorial fellowship.

It is proposed to continue the Caley lectureship now held by Dr. Baker and the Stokes lectureship now held by Dr. Hobson in mathematics; each lecturer is to receive a stipend of 200*l.* a year, payable by the University so far as the benefactions received for these purposes are insufficient. It is also intended to continue the appointment of the lecturers in mechanical engineering and in electrical engineering, which would lapse at Midsummer unless the University otherwise determine, and it is proposed in future to appoint three demonstrators of mechanism and applied mechanics in place of the two who now exist.

The special board of studies recommends the appointment of a university lecturer in agricultural physiology for five years from Midsummer, at an annual stipend of 150*l.*, payable out of the agricultural education fund.

The election to the professorship of political economy will take place on Saturday, May 30. Candidates are requested to communicate with the Vice-Chancellor on or before Monday, May 18.

The professor of botany records the gift of more than 4000 specimens of British plants, in excellent order, and mounted and prepared with unusual care. These have been presented by the Rev. J. D. Gray, Clare College, Vicar of Nayland, Suffolk.

The syndicate appointed to consider the steps to be taken for the erection of a building for the department of agriculture recommends that it be authorised to accept a tender for the building described in a report to the Senate, provided the cost does not exceed the architect's estimate of 13,000*l.* If this proposal should be accepted by the Senate and the building be proceeded with, it will almost exhaust the funds collected by the Cambridge Association for the agricultural school, and leave nothing for furniture and fittings or for maintenance. It is hoped that the funds of the agricultural building, in which the late Duke of Devonshire took so keen an interest, and which he did so much to collect, will be increased materially before the end of the year.

LONDON.—A course of eight lectures on the "Structure and Functions of the Central Nervous System" will be given in the physiological department of University College by Dr. W. Page May on Wednesdays at 5 p.m., beginning on Wednesday, May 13. The lectures are open to all students of the University and to qualified medical men on presentation of their cards.

PROF. H. POINCARÉ, professor of astronomy in the Paris École polytechnique, has resigned his chair, and has been given the title of honorary professor.

THE new Education (Scotland) Bill introduced in the House of Commons on March 26, and read a second time on Tuesday, May 5, is not so comprehensive a measure as the Bill of last session. It is interesting, however, to notice how much larger a part educational matters pure and simple take in the Scottish Bill compared with Education Bills affecting England. The Bill for Scotland now before Parliament proposes to give school boards additional general powers for the supply of meals subject to provisos with regard to defraying expenses, for bringing opportunities for education within easier reach of children in outlying districts, and for collecting and distributing information as to employments open to children on leaving school. It makes it the duty of the parent to provide efficient education for his children from five to fourteen years of age, and gives the school board power to summon to one of its meetings parents neglecting their duty, and if satisfactory reasons are not forthcoming to issue an attendance order, which, however, may be made the subject of appeal to the Sheriff. The school board is given power also, in issuing exemption certificates, to impose as a condition of exemption such attendance as it shall prescribe, after the age of fourteen and until such age not exceeding seventeen years as the school board shall think fit, either at a day school or continuation class, or both. The school board must provide continuation classes, and may make, vary, or revoke bye-laws regulating attendance at continuation classes. It is made a punishable offence to employ a boy or girl at any time when his attendance is by any bye-law required at a continuation class, and parents must assist the school board under liability to fine. The Bill is thus a first step to make education in Scotland compulsory up to the age of seventeen, through continuation schools.

A DISCUSSION took place in the House of Commons on April 29 on the subject of education in India, and a motion was brought forward for "an impartial and searching inquiry into the scope, character, and methods of education in India." The grounds on which this proposal was urged were that the Indian Government had pronounced in favour of free elementary education, but no progress had been made towards it. Also that only one-tenth of the boys of school-going age were actually at school, while the proportion of girls at school was very much smaller even than this. It was also pointed out that the "amount of money spent on education was deplorably inadequate,