

"The Advertiser," 18th Sept. 1897.

be held, and in the afternoon "The necessity for science teaching in our public schools" will be discussed. A concert social and dance will take place in the evening. The Minister of Education has invited the teachers to visit the Agricultural College at Roseworthy on Thursday, and according to present arrangements this will conclude the meetings in connection with the conference.

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PUBLIC TEACHERS' UNION.

UNIVERSITY CONVERSAZIONE.

The members of the union were invited by the Adelaide University council to attend a conversazione at the University on Tuesday evening, and a very large number accepted, the library in which most of the evening's programme was carried out being crowded. Lady Victoria Buxton and the Dowager Lady Lamington, who were accompanied by Major Guise, were present, and remained for the greater part of the evening. Amongst others who accepted invitations were the Commissioner of Public Works and Mrs. Jenkins and Sir Charles Todd. For nearly an hour Professor Bragge kept the large audience deeply interested in a lecture on "Telegraphy without wires." He said there was an ether filling all space, and it was by aid of forces transmitted through it the sun attracted the earth. This ether was also the medium through which waves of light and heat passed from a luminous body to other bodies. It must therefore be of an elastic nature like a jelly, and yet a very impalpable jelly, or heavenly bodies would be checked in their motion through it. Faraday, by his experimental researches, and Maxwell, by his mathematics, had built up a theory according to which electrical disturbances were also propagated through the ether, and differed from light only in degree, not in kind. They were, in fact, waves in the ether of all lengths. Light waves were simply those of a length ranging from about one twenty-five thousandth to a fifty thousandth of an inch. Whilst most substances were opaque to the short light rays they were not necessarily so to the longer electric ones. Hence, using them, we could emit and receive signals without using wires, the waves passing freely through the majority of substances. Hertz first demonstrated in practice this sending and receiving of electric waves. At first the distance to which signals could be transmitted was a few yards. By the use of certain delicate relays this distance could now be increased, and the new work of Marconi was simply in the improvement of the detector or receiver of waves. It consisted mainly of a tiny glass tube containing some filings of nickel and silver. A battery was always tried to send a current through the tube, but found it difficult, as the filings touched one another irregularly and loosely. When the wave was received the oscillation was made to swing through these filings. It slightly fused them together, and the battery was then able to send through sufficient current to ring a bell. With the aid of this Marconi, working with Mr. Preece, of the General Post-Office, London, had transmitted messages a distance of nine miles across the Bristol Channel. Marconi's apparatus was shown in action, a bell responding readily in the lecture-hall to an impulse sent from a vibrator in quite a different part of the building. The lecture was illustrated by several diagrams on a magic lantern screen, and at the conclusion the professor was heartily applauded.

For the next hour an excellent musical programme, under the direction of Mr. T. H. Jones, Mus. Bac., was carried out. It opened with a pianoforte solo by Mr. Jones, who played "Caprice alia tarantella," a piece composed by himself for Miss May Habgood, who has played it with much success in Adelaide and in other parts of the world. Mr. Oscar E. Tauber appeared to advantage in two numbers. He first gave "The Toreador" from "Carmen" (Bizet), and afterwards sang "The

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perfect life" with nice feeling. Miss Guli Hack, A.R.C.M., gave "My mother bids me bind my hair" (Haydn) splendidly and later in the evening was accorded a hearty round of applause for her rendering of the lively little ditty "When love is kind," to which she bowed her acknowledgments. Miss Nora Kyffin Thomas contributed a violin solo "Air varie" (Vieuxtemps) most successfully, her intonation being most exact, and her technique remarkable for so young a player. She was heartily applauded for her effort. Mr. Frank Monk sang "Only once more" (Moir) most effectively, his fine tenor being much appreciated, while Mrs. T. H. Jones met with equal success in her tasteful rendering of "Should he upbraid," in which she had an opportunity of exhibiting the flexibility of her true soprano. One of the best numbers of the evening was the concluding one, the duet "A night in Venice" (Lucantoni) by Mrs. T. H. Jones and Mr. F. Monk, whose voices blended most harmoniously. Afterwards the large lecture-room was used by Mr. R. W. Chapman, M.A., for the exhibition and description of about 30 astronomical slides, which were well shown on a large screen by Mr. R. B. Adamson, but many adjourned to the laboratories to see the numerous chemical and other experiments. Professor Bragg showed some experiments in telegraphy without wires and illustrative of the same subject. Mr. Alfred Paton produced some syntonic vibrations of Leyden jars and other experiments. Mr. Fuller and several of the students had a number of histological preparations and physiological experiments in the physiological laboratory, and in the chemical laboratory Professor Rennie and Mr. Turner exhibited the chemical apparatus of the University, and conducted several experiments with it. Amongst these were an example of a geyser at work and illustrations of crystallisation, of the extinguishing effects of carbonic acid gas, and of the decomposition of water. One of the most interesting exhibitions was that of the Rontgen rays and fluorescent screens, which enabled many of the visitors to see the bones of their hands and their sleeve-links through their coat sleeves. The professors and students were occupied until half-past 10 in showing the visitors over the institution and explaining the use of the many scientific instruments in the laboratories.

PORTRAIT OF MR. HARTLEY.

In the lobby of the Trades Hall an excellent portrait of the late Mr. J. A. Hartley was exhibited. It was drawn in crayon by Mr. Wilkinson and was an admirable likeness of the late Inspector-General.

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RECEPTION BY THE UNIVERSITY COUNCIL.

In the evening the members, by invitation of the University Council, visited the University, where a highly entertaining and diversified programme was carried out. The Vice-Chancellor, Dr. Barlow, received the visitors until 8 o'clock.

Professor BRAGG then delivered a lecture on "Telegraphy without wire." He said there was an ether filling all space. By aid of forces transmitted through this ether the sun attracted the earth. The ether was also the medium through which waves of light and heat passed from a luminous body to other bodies. It must, therefore, be of an elastic nature like a jelly, and yet a very impalpable jelly, or heavenly bodies would be checked in their motion through it. Faraday by his experimental researches, and Maxwell by his mathematics, had built up a theory according to which electrical disturbances were also propagated through the ether, and differed indeed from light only in degree, not in kind. They were, in fact, waves in the ether of all lengths. Light waves were simply those of a length ranging from about $\frac{1}{10000}$ to the $\frac{1}{1000}$ of an inch. Whilst most substances were opaque to the short light waves they were not necessarily so to the longer electric

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In the chemical laboratory Professor Rennie and Mr. Turner carried on experiments with chemical apparatus, showing an example of the geysers of New Zealand, the crystallization of liquids, the extinguishing effects of carbonic gas, and the decomposition of water. All the rooms were engaged with sights of a most entertaining nature. Mr. Fuller and students had charge of the physiological laboratory, the popular Röntgen and fluorescent screens were in charge of Mr. A. L. Rogers in the physics apparatus-room, and in the physics laboratory Mr. A. Paton conducted syntonic vibrations of Leyden jars, and other experiments illustrative of Professor Bragg's lecture, and also exhibited an apparatus for instruction in elementary practical physics.

An excellent programme of vocal and instrumental music, arranged by Mr. T. H. Jones, Mus. Bac., was given in the Library from a quarter to 9 until a quarter to 10. Mr. Jones opened the programme with a brilliant and effective performance of his own, "Caprice alla tarantella," a pleasing piece of *salon* music. Mr. Oscar Taeuber's fine baritone voice was heard with pleasure in the toreador's song from Bizet's "Carmen," and later in the evening in a fine declamatory rendering of "The perfect life" (H. Jones), which was enthusiastically applauded. Miss Guli Hack's cultivated voice and excellent method were agreeably displayed in Haydn's setting of "My mother bids me bind my hair." Her second number, "When love is kind," was enthusiastically received. Miss Nora Kyffin Thomas achieved what may be looked upon as the success of the evening in her fine rendering of Vieuxtemps' "Air varie," for violin solo. This by no means easy piece was interpreted with an ease and spontaneity, and withal fine quality of tone, not often exhibited by so youthful a performer. Miss Thomas was vociferously applauded. Mrs. T. H. Jones gave a brilliant rendering of Bishop's florid writing, "Should he upbraid," which was warmly received, and she was also heard in a pleasing rendering of Lucantoni's "A night in Venice," sung with Mr. Frank Monk. Mr. Monk also sang a solo, "Only once more" (Moir), with excellent taste and expression. The duties of accompanist were carried out by Mr. T. H. Jones, Miss E. Meyrick Hack, and Miss Kyffin Thomas. At the conclusion of the programme Dr. BARLOW, the Vice-Chancellor of the University, in a few well-chosen words, thanked all those who had taken part in the concert.

From 10 o'clock until half-past Mr. R. W. Chapman, M.A., exhibited in the Library a number of astronomical slides, which embraced pictures of various portions of the moon, the Milky Way, various nebulae, and the Magellan Clouds. Each view was accompanied by an interesting explanation, which was listened to