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THREE CENTS

THE MARCONI SYSTEM

Wireless Telegraphy Explained by Professor Morse—How Messages are Sent Across the Atlantic.

The following description of the Marconi system was omitted from Professor Morse's lecture yesterday morning, due to a lack of time.

The diagram distributed yesterday represents approximately the arrangement employed by Marconi in his famous trans-Atlantic experiment. Information obtained since the diagram was drawn shows that at the English end of the transmission aerial wires were supported by twenty poles, each 210 feet in height. Not all of the wires were, however, used on that occasion. It also appears that, due to its greater sensitiveness, a telephone receiver was employed in place of the Morse sounder at M. The altitude attained by the kite at the St. Johns end, while signals were being received was 400 feet.

Taking up first the transmitting or Poldhu station G, is a plate of metal sunk in the ground, to which is attached a copper wire, the wire terminating at its other extremity in a solid brass ball P, an inch in diameter. Opposed to this ball and about half an inch from it is a similar brass ball, the wire from which leads either directly to the top of a high pole or up a kite string. The precise length of this aerial wire Marconi early found to be of vital importance, as will be explained later. All auxiliary apparatus shown at the transmitting end is merely employed to cause sparks to jump across between the brass balls. These sparks fly across in a rapid torrent, which lasts a longer or shorter time according to whether a dash or a dot is to be expressed. The sparks are produced by a coil of very many turns of fine and highly insulated copper wire O, wound upon a bundle of iron wire I, much as thread is wound upon a spool; the two extremities of the coil O being attached, one to each brass ball. The sparking energy produced in the coil O is due to a second coil Q of coarse wire of few turns, wound upon the same bundle of iron wires, Q in turn deriving its supply of electric energy from galvanic battery V, where zinc is dissolved in acid. It is necessary that the flow of electricity through the coil Q be rapidly interrupted, a function which might be performed by an ordinary electric bell. The sending key S is a familiar object to any one who has watched a telegraph operator at his work; in the present instance, when S is depressed, T begins to buzz and sparks continue to fly between the balls until it is released.

The rapid succession of sparks pass-

(Continued on page 4)

Y.M.C.A. STATE CONVENTION.

From February 20 to 23, at York, will be held the twenty-second annual state convention of the Nebraska Young Men's Christian Associations. The preparation for this convention are in charge of the state committee of the Y. M. C. A. of which Prof. H. B. Ward of the University is the chairman and W. J. Hill of Lincoln, treasurer.

It is expected that several hundred delegates will be in attendance, representing the nine city and eleven college associations in the state. The citizens of York have, through a special committee, arranged for the free entertainment of all accredited delegates. The only expense to delegates will be railroad fare a special rate of one and one third fare having been secured on all roads.

State conventions of this kind are for the purpose of consultation and conference on Association's methods and problems; reports from the different points in the state, a review of the field and plans for operation in the future.

There will be strong addresses by influential men in the state, also by some association leaders outside of Nebraska. The results received from attending this convention will well repay the effort; those attending such conventions in the past have considered the time well spent. Any member of the University Y.M.C.A. who will go as a delegate should hand his name to Mr. Hubbell as soon as possible. It is expected that twenty men will attend from the University, and there is still room for more. A game of basket ball will be played during the convention between the Omaha and Lincoln teams. Chancellor Andrews appears on the program with the subject, "Christian Citizenship."

DEAN SANDERS—YALE.

At 4 o'clock Sunday afternoon Frank K. Sanders, Dean of Yale Divinity school will deliver an address in the University chapel. All students and friends, both ladies and gentlemen are invited to this meeting. This is an opportunity to hear a worthy man from the east. Let all the students turn out and hear him.

Frank D. Sanders who is to address the Y.M.C.A. meeting next Sunday afternoon was at Minnesota University recently, the daily of that school speaking of his visit said in part: "It has been some little time since the University of Minnesota had the pleasure of being visited by any 'wise men from the East' but yesterday it had this pleasure." Dean Frank Sanders of the Yale Divinity School, who is in the city, was present at chapel and spoke to the students. Dean Sanders is himself a western man being a graduate of Ripon College, Wisconsin, and feels much interested in western institutions of learning."

WILL EXHIBIT WORK.

Several Departments to Show Their Work To-morrow—Shops and Laboratories Will be in Running Order.

The engineering departments of the University will endeavor to show the public the character of their work, tomorrow afternoon. Shops, laboratories, boiler houses and engine rooms will be open and plenty of students will be on hand to answer questions of the interested people. Nothing special will be attempted in the civil and mechanical engineering departments, except that the shops and laboratories will be in operation so that visitors may get a clear idea of how the work is carried on. It is probable that the foundry will be running and some casting done.

The domestic science department will make a special effort to exhibit its work. The laboratories, in Mechanic Arts hall, will be open to visitors from two to five o'clock. Arrangements have been made for an elaborate exhibition of all foods, however. Bread-stuffs, in all its forms of preparation, will be exhibited instead of a display of cakes, pies and other pastries. This, it is thought, will be more satisfactory than to supply visitors with samples of various éatables. An interesting feature will be some experiments with the yeast plant, showing the conditions under which it works best and the results obtained.

A model table will be spread to show the proper position of dishes and the appearance in general of a perfectly arranged dining table. Owing to the fact that the commencement exercises take place tomorrow night, the electrical exhibit will be given tonight. No pains are being spared to make this a most satisfactory exhibit. The armory, where it will be held, was given over to the engineering students yesterday morning. The building is being rapidly fitted with the necessary apparatus and machinery. Commodious platforms are being erected for machines and fixtures which are designed especially for exhibiting the late inventions in electricity.

The cadet band will be on hand to furnish music for the occasion. The opening will be at 7:30 this evening and will be accompanied by appropriate music. One of the prominent features of the exhibition will be the fine display in electrical decorations, in which the latest effects will be produced. Professor Morse will have in progress high potential experiments of 50,000 volts. Experiments with the Hertz Wave and the Marconi Wireless Telegraph will be in progress. The electrical welding process will be presented and explained. There will also be several experiments of the original Nikola Tesla Multiphase, representing the rotating magnetic field.

AN ESTIMATE OF NEBRASKA.

One of the latest additions to the University library is a book entitled "Student Life and Customs," written by Professor Henry D. Sheldon of the University of Oregon. It is numbered volume fifty-one in the International Series and is a very comprehensive work on college life.

Student life is touched upon as found in England, Scotland, Germany, France and American colleges and universities; the latter being the more fully enlarged upon. American colleges are traced from their colonial origin, including their growth, development and evolution down to the present day in all phases of student life, embracing debating, oratory, class competition, athletics, fraternities, societies and organizations of all kinds at all connected with institutions of learning.

Professor Sheldon in the compiling of his material made use of extensive data obtained direct from prominent colleges in the country. On looking through the book we find a few references made to the University of Nebraska which may be interesting.

The customs of hazing and rushing are ceasing although the class feeling in Nebraska is not on the decline in spite of the elective system. The more substantial elements of student life is found in the study of debating, but Nebraska is omitted, probably for good reasons, in regard to its leagues for debating and in its public speaking attainments. In athletics Nebraska ranks lowest of all the colleges given in the percentage of students in that field of effort having a standing of about 7 per cent. The average for all colleges is 20 per cent. The University of New York average 80.

Professor Sheldon dwells at great length on the origin and growth of the college fraternity including its purpose, evolution and competition. He names the percentage of students, who are members of fraternities in Nebraska at twenty. Other colleges particularly in the east have larger percentages running to 50 and in some cases almost to 80 per cent.

The book is a very valuable addition to publications on college life and is both interesting and attractive.

The senior laws held another meeting yesterday afternoon for the purpose of choosing the remaining officers who were not elected last Tuesday owing to the lack of time. The following were elected: First vice-president, L. B. Fuller, secretary, H. Thomas; class senator, Rotruck. After the election each officer responded with a lengthy speech which met the hearty applause of the lawyers.

The quarters of the Harvard Club in New York are to be enlarged at a cost of \$195,000.