C. E. SUMMER SCHOOLS

By PROF. A. E. BURTON.

The first Summer School in connection with the course in Civil Engineering at the Massachusetts Institute of Technology was held in the various localities of Massachusetts, in June, 1888. It was an optional school, open to all students in Courses I, XI, and XI, who had completed satisfactorily the third year work. There was no extra charge for tuition, and it was not a required subject for the general civil engineering student. It was, however, a part of the required courses in the special course for Course I, and for the geological student.

The main object of this summer course was to give practical experience to students in the field methods of carrying on a geological and topographical survey. In addition to this a special week of instruction was given in Hydraulic Measurements. A base line was measured and a system of triangulation extended from it. A topographic map was constructed, with the special object of showing the relation of the topographic form to the geological structure, and the flow of the contours in this river basin, as determined by several different methods of gauging. Eighty students were in attendance, Professors Swain conducted the Hydraulic Measurements; Professor Swain gave the instruction in Attraction; and Professors Burton and Porter carried on the topographic and topographical work. This experimental Summer School was such a success that President Walker determined that it should be made a permanent part of the Institute. A committee was appointed to make a survey and a report on the following week. It was hoped, as the constitution says, "to awaken and maintain an active interest in the study of civil engineering among its members, and in general in their intellectual advancement and improvement." At this meeting the six seniors and seventeen juniors present got matters under way; committees for framing a constitution and for faculty were appointed and were ready to report on the following work.

At this second meeting, the minutes state: "President Walker spoke for twenty-five minutes. He was followed by Professors Swain, Burton, Allen, and Porter, whose remarks were most interesting and valuable and created much enthusiasm among the students." From this time on the success of the society has been assured, and well attended bi-weekly meetings were held throughout the year in the Rogers Building.

At these meetings papers prepared by the members on work they had been personally connected with were given, and not infrequently one of the professors or instructors of the Institute spoke in support of the papers. This was the general character of the meetings, and now and then a practicing engineer called in to speak. The society banquet in the spring of 1889, when a general agitation for a society banquet was expressed, was highly successful. The society banquet has been fifteen.

The total number of students attending these schools is two hundred and ninety-one; the total number of students attending each school has been fifteen.

The last two schools, those of 1901 and 1902, were held at a camp on Hingham Lake, Maine. In 1901 there were twenty-seven students in attendance. In the past the localities chosen for holding this field work were the Catskill Mountains, the Delaware Water Gap, the Adirondacks, Lake Sunapee, N. H., the Catskill Mountains, Lake Winnippegus, N. Y., the Catskill Mountains, and Lake Winnepagee, New Hampshire. Detailed topographical notes have been made at each of these sites.

It is the universal testimony of students and instructors that these optional summer schools in the past have been so arranged that this success has been in a great part due to the conditions of living connected with the work. Instructors and students are thrown together in a way quite impossible under the conditions of Institutes like in Boston; they are practically in camp together for four weeks, and a great many of the details which might be overlooked by the casual observer, and thus the excursions are made especially valuable. Individual trips by the students are also encouraged.

In addition to these dinners and excursions, meetings were held every few weeks which are addressed by some man of considerable experience in engineering who brings the work in the field nearer to the student than reading and study could possibly do. The desire to hear more of this character has grown of late to the increase today, and it is probable that meetings will be held in the future. The frequency and the informal nature of these gatherings is important in that the free discussion of all subjects will be indulged in by those present and that much valuable information will be gained in this way.

Owing to the difficulty of securing speakers far in advance, a program for the entire year is next to impossible to arrange. However, a trip to one or two signal towers in the B. & M. R.R. yards, a lecture by Prof. Burton on the history of the Falk Co., Milwaukee, Wis. Steel Founders & Mfrs. (Continued on page 8.)

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