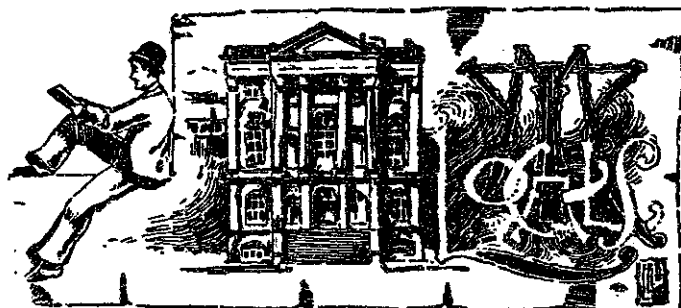




D. G. Robbins has been elected to the business staff of TECH. 3

R. C. Brady, formerly a member of the Class of 1905, has been elected president of his class at Annapolis.

Professor Sedgwick spoke on "Science and Health" before the Massachusetts Schoolmasters' Club last week.

Professors Vogel and Rambeau were present at a meeting held last week to organize the New England Modern Language Association.

Any man rated '05 who has not received a question blank for Class statistics of *Technique*, 1905, should leave his name and address at the "Cage" at once, for Amberg or Marcy.

Two more ensigns and a midshipman are now taking a course at Tech prior to their final graduation from the United States Naval Academy at Annapolis. These men make a total of twelve from the Academy now receiving instruction at Tech, but it is understood that the Navy Department will diminish the number within a few years.

Mr. John F. Mahan, director of athletics, under instructions of the Advisory Council, has obtained over 600 bushels of arc cinders, and placed them on the tracks at the Tech Oval. The winter weather will do the rest, and when the track is opened in the spring we ought to have one of the best running tracks of its size in New England.

Mr. C. S. Peirce, the eminent scientific investigator, gave a very interesting talk on the "Relation of the Sciences" at the Technology Club Monday afternoon. Graduate students and others interested were invited, and the large common room of the Club was completely filled. Mr. Peirce first spoke of mathematics as being a branch of science necessary to all the others. From a sketch of some of the less understood mathematical subjects he led on to the history of some of our most important manuscripts, and, finally, to an analysis of the methods of inductive reasoning.

Engineering Excursions.

In making an excursion through an industrial plant of some size, one sometimes experiences a sensation of bewilderment, followed by the remark, "What is it all about?"

A brief outline of what may be seen at some of the interesting plants around Boston may be of some help to the mechanical engineers of the future.

On Cow Pasture Point, Dorchester, is situated the Boston Main Drainage Station. It is easily found by taking a Dorchester Avenue car, getting off at Mt. Vernon Street, and walking about a mile across the marsh.

The engines are of the vertical compound type. The horizontal duplex pumps are of especial interest. The boilers are horizontal, of the locomotive type. A Greene economizer heats the water on the way to the boiler by means of hot flue gases. The men in charge will gladly explain the sewage conduits and screens. Don't forget to ask about the "cemetery." This trip will be pleasantest if taken on a sunny day at high water.

Another very interesting plant is the Metropolitan Sewage Pumping Station. Go by the elevated to Sullivan Square, and transfer to an Everett or Malden car. The station is just this side of Mystic River, about three minutes' ride from Sullivan Square.

The station has triple expansion Reynolds Corliss engines, with a vertical shaft operating a submerged centrifugal pump. The pump receives sewage under a slight head, and discharges it against a low head, forwarding the sewage to an outlet at Deer Island.

Question the men in charge about supporting the weight of the pump and shaft. Notice a thrust bearing, and the method of lubricating it. Only one crank is used. Notice the loci of "crank pins" of high and low pressure cylinders. There is an air pump on the tail rod of the intermediate cylinder. The boilers are return tube with economizer. A similar station to the one just described may be seen in East Boston. The engines used in this station are illustrated in the thesis of E. A. Gallison, '98, Course II.

The following is a trip which may be taken by two or three men:

The engine room of the Board of Trade Building at the corner of State and India Streets, Boston. The janitor must be found to conduct you to the basement. The main point of interest is the hydraulic elevator system. Compound duplex pumps may be seen, of the centre packed type. Note a good arrangement of suction air chambers. The hydraulic plungers under the elevators are similar to those used in Hotel Westminster.