

SEMINAR WEEK-END

By Theodore C. Combs '27

The Seminar Week-end, conducted March 5 and 6, marked a new high in alumni-campus relationships. Undertaken as a combined get-together and refresher course for graduates, it exceeded all expectations—both as to attendance and success of the program. It proved a contention that only our Alma Mater can present such an event of far reaching significance. It demonstrated that the classes of '26 and even '12 are as much interested in serious lecture room sessions as in group social activities.

There are several reasons why the Seminar Week-end was bound to succeed. Few, if any, institutions of higher learning possess a more notable faculty. These men, despite their many other time-consuming activities, in effect said, "Our time and talent are at your disposal. How may we best serve you?" Coupled with this was the often expressed desire of alumni to keep contact with the campus, learn of new developments in their respective fields of engineering and science and (although it was not so stated) submit themselves to the stimulus which comes with interest-inspiring effort. Mention seminars to any one of the 450 who attended and you will learn that the stimulus persists.

Just as important in this experiment was the catalyzing agent: the organizers. The committee comprised Clarence Kiech, '26 (chairman), Fred Ewing, '27; Ward Foster, '27; Wesley Hertenstein, '25; Don Clark, '29; A. D. Hall, '22; William Humason, '36; Edward Tuttle, '28, with other members of the Board of Directors acting in an advisory capacity. These men arranged for speakers, subjects, campus arrangements, registration, overnight accommodations and publicity. Miss Theresa Dierkes of the Placement office undertook a big burden of secretarial work. Their's was a big task, well done and much appreciated.



Optical Shop where the 200 inch mirror is being polished.

Aside from general assemblies, seminars were conducted simultaneously in groups of from two to eight. Those in attendance were permitted to visit sessions in accordance with individual preference. Following is a brief listing of the program:

"How the Institute can Help an Alumnus and How the Alumni Association can Help the Institute," by Prof. E. C. Watson.

"The Cancer Problem," by Prof. Seeley G. Mudd and "Vitamins in Health and Disease," by Prof. Henry Borsook. Prof. Mudd discussed certain phases of the cancer problem and the treatment of mid- and late-stage malignant lesions by 900kv. X-rays. Prof. Borsook gave interesting new facts on the physiological aspects of vitamins.

"The Pursuit of the Absolute Zero," by Prof. Alexander Goetz. Discussion of the physics of the lower end of the temperature scale and of the methods of reaching the absolute zero within a few hundredths of a degree. Latest speculations as to a possible "eventfulness" within the last fraction of the last degree may modify even certain thermodynamic aspects and render the attainment of the absolute zero possible.

"Uncle Sam's Domestic Tranquility for the Next Fifty Years," by Prof. William B. Munro. A vital discussion of prospects and how they will affect this and the next generation.

"The New Particles in Physics," by Prof. Carl D. Anderson, '27, Nobel Laureate. The anatomy of the atom and how new findings compel modification of former concepts. A discussion of recent discoveries, including Dr. Anderson's recently-announced X-particle.

"Astrophysics," by Prof. Ira S. Bowen. An exposition on what we can learn about matter from the stars.

Electrical Seminar, led by Prof. Royal W. Sorensen who spoke on general advances in electrical engineering. Discussion of advances in electrical welding and high voltage equipment, by Prof. Maxstadt. Presentation of advances in vacuum tubes and electronics, by Prof. P. S. Mackeown.

Mechanical Seminar, led by Prof. Robert L. Daugherty who discussed advances in mechanical engineering. Prof. Clapp reviewed developments in materials and design. Prof. Knapp discussed hydraulic developments, including soil conservation work.

Civil Seminar, conducted by Profs. R. R. Martel and F. J. Converse, comprised advances in civil and structural engineering.

Chemistry Seminar, led by Prof. Linus Pauling, who discussed advances in theoretical chemistry, including a brief survey of molecular calculations, magnetic properties of blood and their significance, and protein structure as related to the specificity of anti-bodies and the like. Prof. Lacey discussed phase equilibria of hydrocarbons. Prof. Yost discussed the use of radio-active elements formed by transmutation as tracers in chemical and physiological reactions. Dr. Buchman discussed vitamin chemistry and physiological effects of structure.

Physics Seminar, led by Prof. William Houston, comprised the general aspects of modern physics. Prof. Robert A. Millikan, Nobel Laureate, discussed cosmic rays. Transmutation of elements was discussed by Dr. Fowler. Prof. Potapenko reported on ultra-short electromagnetic waves. Dr. Du Mond reported on X-ray spectrometry.

Geology Seminar, led by Prof. John P. Buwalda who also described the new geology buildings. Prof. Ian Campbell discussed geological exploration in the Grand Canyon. Prof. Chester Stock discussed recent developments in vertebrate paleontology. Prof. Hugo Benioff reported progress in design of geo-physical and seismological instruments.

Aeronautics Seminar, led by Prof. Arthur Klein, included advances in aeronautics and comments by members of the staff.

Economics and Current Literature Seminar, conducted by Profs. Graham A. Laing and Clinton K. Judy.

"Ethics and the Engineer," by Prof. Theodore Soares. A chapel session conducted by Mr. John Price, Tech Y. M. C. A. Secretary.

"This World's Troubles and How They Affect Us," by Prof. Horace Gilbert. What's going on in the international picture and what to do about it. A long-range viewpoint of the significance of events in Germany, Italy, Spain, Japan, and China.

"What Genetics Means," by Prof. Thomas Hunt Morgan, Nobel Laureate.

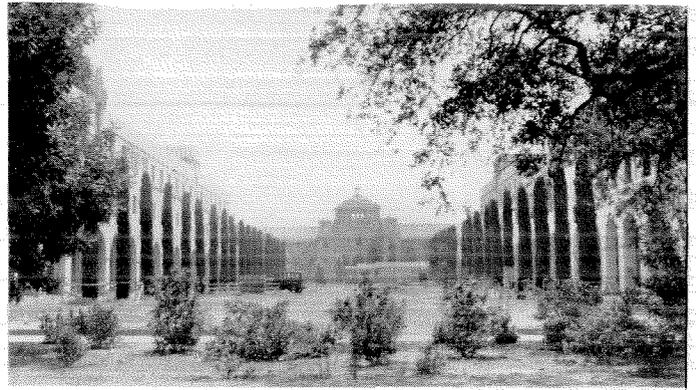
"Biochemistry at California Institute of Technology," by Prof. Henry Borsook.

"The Discovery of Plant Hormones," by Prof. F. W. Went.

"Chemistry in World Affairs," by Prof. Arnold Beckman. New chemical discoveries in industry; how chemical discoveries are creating new products and new jobs; how chemistry may revolutionize agriculture; chemical utilization of petroleum, etc.

"The Quest for Truth," by Prof. E. T. Bell. "Seek and ye shall not find." Is man's age-old search for truth, logic and proof futile? Possible progress by denial of the "self-evident." Where are modern science and mathematics leading us?

In addition to the foregoing seminars, several other events were sandwiched in to round out the program and complete the picture of Tech progress. On Saturday afternoon



New Science Buildings Complete West Approach to Throop Hall

a tour of new buildings was conducted by Wesley Hertenstein, '25; Lawrence South, '23, and Arthur Duncan, '23. These three engineers impressed visitors with the magnitude of the Institute construction program. Buildings were seen in varying states of completion.

Following this, an inspection of the tenth-scale model of the 200-inch telescope was conducted by Dr. John Anderson. This is an exact model, completely mechanized even to the automatic control equipment. It has been valuable in advance preparations for the huge Palomar Mountain Observatory, just as the production of small lenses has pioneered the way for the precise technique now being employed on the 200-inch lens.

On Saturday evening a dinner session was held in the Pasadena Athletic Club. Speaker was Prof. Arthur Raymond, chief engineer of the Douglas Aircraft Company, who chose "The New Douglas DC-4" as his address. He described the new 42-passenger ship now being developed and emphasized many innovations which it will contain. Attendance was gratifying.

Those members of the faculty who helped make the Seminar Week-end such a success, deserve our heartfelt gratitude for the way in which they gave of their time and energy. Particularly Dr. Millikan, Dr. Munro, and Professor Watson, were active leaders and generous hosts.

Alumni within ready traveling distance of Pasadena who failed to attend can indeed be regretful. Here was an opportunity unparalleled. No convention has ever provided such a brilliant array of speakers and topics—or such a concentration of fellow Tech men. The old grads—who attended 450 strong—say, "Once is a habit." It is hoped that the Seminar Week-end can become at least an annual affair.