

In the early 1830's steam coaches operated successfully as public carriers in London and on some of the main coach roads of England. Public sentiment against them was aroused, however, by the stage owners and drivers who feared that they would be robbed of business and by the farmers who anticipated the loss of a market for their horses. The "steamers" were ridiculed and even stoned and trenches were dug across the roads to impede their progress. In 1836 the English Parliament passed a law requiring that a steam coach should be preceded by a man on foot with a red flag to warn people on the road, and also permitting such heavy tolls on steam vehicles that operation at a profit became impossible. At the same time the steam railways with their higher speed were taking more and more of the passenger traffic and proving so profitable that business enterprise turned to their development. As a consequence, by 1836 the mechanical road carriage was practically abandoned in England; its further exploitation has taken place mostly in America, France and Germany.

One of the caricatures here reproduced (Fig. 1) is by John Leech (1817-1864), best known for his woodcuts in *Punch*. Another (Fig. 3) is by Robert Seymour (1800-1836), the first illustrator of *Pickwick* and the creator of the types of Pickwick, Winkle and Tupman upon which no successor has contrived to improve. The series of four (Figs. 8-11) entitled "The Progress of Steam" was executed by Henry Alken (fl. 1816-1831), famous for his sporting prints. The artists who executed the rest are unknown as the signatures "Shortshanks," "Sharpshooter," etc., are obviously pseudonyms. The originals are colored, are approximately nine inches by 13 inches in size, and were published by Thomas McLean, 20 Haymarket Street, G. Humphrey, 24 St. James Street, and G. King, Chancery Lane, all of London.

C. I. T. NEWS

DOCTOR ROSCOE G. DICKINSON

DR. ROSCOE GILKEY DICKINSON, professor of physical chemistry, and acting dean of the graduate school at California Institute of Technology, died on July 13 after a brief illness. He was 51 years old.

Dr. Dickinson was an internationally known scientist. In America, as well as abroad, he was well known for his early work on the determination of the structure of complex crystals by use of X-ray and for his study in the field of photo-chemistry.

He received his bachelor degree from Massachusetts Institute of Technology in 1915, coming to California Institute of Technology in 1917 as instructor of chemistry, receiving his doctor's degree in 1920. This was the first Ph.D. degree conferred by the Institute. He was a National Research Fellow from 1920 to 1923.

Since outbreak of war, he devoted full time to war research problems in connection with the Office of Scientific Research and Development.

Dr. Dickinson, who made his home in Pasadena, is survived by his wife, a daughter, and a son who is a lieutenant in the Navy; also a granddaughter.

ADMINISTRATIVE REORGANIZATION

JAMES R. PAGE, president of the Board of Trustees of the California Institute of Technology, on August 20 announced a reorganization of the administration of the Institute.

Dr. Robert A. Millikan, who has been at the Institute since 1921, will retire as chairman of the Executive Council and become vice-president of the Board of Trustees.

Most of the administrative work of the Institute has been carried on by the Executive Council in the past. With this change in administration, the Executive Council is replaced by an Executive Committee which will be composed of members of the Board of Trustees and some staff members of the Institute. The staff members will consist of Dr. William V. Houston, Dr. Linus Pauling, Dr. J. E. Wallace Sterling, Dr. Clark B. Millikan and Dr. Richard C. Tolman.

The Board of Trustees is in process of selecting an administrative head for the Institute, who will be designated as president. Dr. William B. Monroe, who has been Edward S. Harkness Professor of History and Government and member of the Executive Council, will become Treasurer of the Institute. He will become emeritus professor to lecture on such subjects as he may desire. Dr. Max Mason, who has been chairman of the Observatory Council and a member of the Executive Council, will continue as chairman of the Observatory Council.

While Dr. Millikan will retire from the administration of detail matters, his continued association with the Institute as vice-president of the Board of Trustees will assure continuity and maintenance of high standards.

PRESIDENT'S REPORT YEAR 1944-45

FIRST, regarding our program: Thanks to Ernie Maag, chairman of the program committee, Carl Friend, who handled the dinner dance, and Kenny Belknap, seminar chairman, and their committees. I believe our activities have entertained and provided engineering information to a larger number of alumni and guests this year than ever before. Attendance has ranged from 30 to well over 300, with the Walt Disney meeting attracting the most. Average attendance for the nine meetings preceding this was 135. I believe that bespeaks the enjoyment provided.

Second, *Engineering and Science Monthly*: Your Board of Directors feels that this is a great tangible product of our Association. We have, I believe, been successful in making this an interesting and valuable source of information for our members. Our success is attributable chiefly to our energetic and resourceful editor, Don Clark, and our capable and proficient publications chairman, Hugh Colvin. These men have been very generous of their time and effort in handling the interesting problems involved in publishing a periodical. We have been fortunate also in receiving regular and excellent editorial advice from Professor McMinn. Further generous advice and help has been received from Dr. Millikan, the Board of Trustees, the Faculty, and many of the Institute Associates. Members of the Alumni Association have responded promptly and efficiently wherever possible when asked to write articles for *Engineering and Science* and to aid in other Association work. One couldn't hope to find a more cooperative group.

The Placement Service has carried on a much more active program than would appear from a tabulation of men placed, because in these times every request filled represents many attempts before an available man is

found. For example, 415 requests for full-time services were received, many of them for more than one man, but only 18 men were placed. This is a ratio of at least 25 positions per man placed. In addition, 89 men, mostly students, were placed in part-time jobs. You should have received a questionnaire recently, a copy of which was sent to all alumni and students on leave whose addresses we knew. It may interest you that about 1,000 of these have been returned, 300 by alumni in military services, 200 by students on leave from the Institute, and 500 from civilian alumni. These questionnaires were sent out to aid the Institute in better serving its students and graduates and to aid the Placement Service in being of maximum benefit to alumni.

You may recall that we said a year ago that the subject of the amount of annual dues and of Life Memberships would be studied with a view to increasing them if it appeared that doing so would benefit the members. The finance committee, consisting of our treasurer, Karl Hegardt, our vice-president, Earle Burt, and Henry Freeman and Al Hall studied this subject and found that our dues are lower than those of any other alumni association on which information was available. They recommended, however, and your Board approved, that dues not be raised this year. The chief reason for raising the dues is the expense of *Engineering and Science Monthly*. However, this expense has been kept within our budget, and we have some reason to believe that *Engineering and Science* will more nearly pay its way as it becomes more mature in its comparatively new form. We still have a job to do, however, to reach our goal of advertising income. From all of you who are in positions where you buy, specify, or recommend advertised goods or materials, we here and now solicit letters stating what your duties are and that you read *Engineering and Science* regularly. Such letters will help in getting more advertising and thus allow us to make the periodical larger and better. Will you please address such letters to *Engineering and Science* in care of the Institute.

Our membership now is about 1,485, including 227 Life Members, as compared with 1,396, including 154 Life Members, last year. Although this is a small increase, your Board of Directors feel that the increase would be greater if we would all help in getting new members. Our ratio of members to total eligible is almost 30 per cent which, so far as we know, is higher than in any other alumni association. Earle Burt, as membership chairman this year, has planned what we believe will be an effective campaign for members during the next year. We hope you will support it.

Receipts during the year closed are estimated at \$4,250.00 and expenses at \$4,200.00, compared with \$3,855.15 receipts and \$4,250.24 expenses for the preceding year.

Our Life Membership Funds in perpetual trust have grown more than \$2,500 this year to a total of about \$13,000. The interest from this fund represents annual dues from Life Members and is used in meeting our general expenses. From the growth of the number of Life Members and the size of the Life Member Fund, you can see that an increasing number of our members have decided that Life Membership at \$50 is a bargain. We hope that such increase will continue.

In closing, I should like to ask you to interest inactive alumni in supporting and becoming active in the Association for, as you and other active members know, real pleasure is experienced in taking part in our activities where you have, as I have had, the companionship of and association with other Tech men. Furthermore, those who plan and carry out Association activities are en-

couraged and repaid by the appreciation expressed in your attendance at our functions, in your contribution of articles, letters, and news notes to *Engineering and Science*, and in your aid in carrying out the alumni program.

I thank you all for the opportunity to serve you. It has been a real pleasure.

Harry K. Farrar, President,
Alumni Association.

MONTH IN FOCUS

(Continued from Page 3)

however, quite a number had started college courses of non-technical character.

The G. I. Bill of Rights entitles veterans to a certain amount of education under certain conditions. Many have availed themselves of this opportunity to continue their education, and many more will follow. With a taste of training in a technical skill sometimes comes the belief that aptitude along these lines is ample evidence of engineering or scientific ability. In some cases this may be true, but in the majority it is only an indication that the individual has an inherent ability to coordinate his hands and to practice certain techniques in a skillful manner.

Already many of these men have applied to engineering and scientific schools for admission. The colleges and universities must exert every possible effort to clarify the character of these technical fields for the applicant so that he may have warning of the type of thing he is getting into. The engineering schools must not lower their requirements for entrance or their standards of instruction to permit men who are best qualified for employment in the crafts of industry to pass through such courses only to find that they are below average engineers. Such action is unfair to those students who have the ability to become engineers and to the men who do not make good. It is definitely not a disgrace to be a skilled technician and not to have a college education. Industry badly needs the skillful hands of young men; several years have passed without the usual recruiting of apprentice groups.

Where are these men to be trained for industry? Who will give them the instruction required to convert their skill from military activities to industrial activities? Vocational schools have been established for this type of training. There are many good ones and many inferior ones. The good ones may not guarantee each student who enrolls a high salaried job at the end of the training period. The success of the student is a function of his own ability and the quality of instruction. Industry can help in this problem by putting its house in order so that it may give council and employment to skilled labor of the younger group which has been absent for so long. Engineers and scientists can do well to assist in clarifying the work in engineering and science to their non-technical friends so that a minimum of errors will be made in the training of veterans for useful and enjoyable work by which they can earn a respectable living in the American way.

UNIDENTIFIED CHECK

A check, No. 1733 dated June 5, in the amount of \$2.50 written on The Anglo California National Bank, Bakersfield, California, was sent to the Alumni office without signature. Will the alumnus who issued this check please contact the Alumni Office immediately?