

ALUMNI NEWS

New Board Members

THE BOARD OF DIRECTORS of the Alumni Association met as a nominating committee on February 20, 1951, in accordance with Section 3.04 of the By-Laws. Five vacancies will occur on the Board at the end of the current fiscal year, one vacancy to be filled from the present Board and four members to be elected by the Association. The present members of the Board and the years in which their terms of office expire, follow:

R. C. Armstrong '28.....1951	J. E. Sherborne '34.....1952
T. C. Coleman '28.....1952	D. C. Tillman '45.....1952
E. J. Macartney '43.....1951	A. C. Tutschulte '31.....1951
R. P. Sharp '34.....1951	W. O. Wetmore '37.....1952
G. K. Whitworth '20.....1951	

The four members of the Association nominated by the Directors are:

G. K. Foster '40	K. E. Kingman '29
P. W. Hubay '49	H. N. Marsh '22

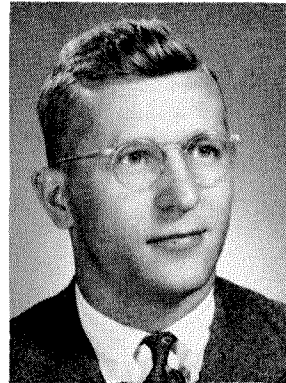
Section 3.04 of the By-Laws provides that the membership may make additional nominations by petition, signed by at least ten (10) regular members in good standing, provided the petition is received by the Secretary not later than April 15. If further nominations are

not received by April 15, the Secretary casts a unanimous ballot for the members nominated by the Board. Otherwise a letter ballot is required.

Statements about the nominees of the Directors are presented in this issue of *Engineering and Science*.

—Donald S. Clark, Secretary

The Nominees



PAUL HUBAY started out at Tech as a member of the class of '43, but wound up getting his B.S. in '49. At the start of his senior year, in 1942, Paul enlisted in the Air Corps as an aviation cadet. He was in the service for five and a half years, coming out in the spring of 1948 as a captain. In September 1948, he came back to Tech to finish his last year. After graduation Paul worked for a year with the Harman Equipment Company in Los Angeles, then joined U. S. Electrical Motors last June as a Field Engineer.

ALUMNI ASSOCIATION OFFICERS

PRESIDENT

G. K. Whitworth '20

SECRETARY

D. S. Clark '29

BOARD OF DIRECTORS

R. C. Armstrong '28	John E. Sherborne '34
Theodore Coleman '26	Donald C. Tillman '45
Everett J. Macartney '43	A. C. Tutschulte '31
William O. Wetmore '37	

VICE-PRESIDENT

R. P. Sharp '34

TREASURER

H. R. Freeman '25

ALUMNI CHAPTER OFFICERS

Chicago Chapter:

PRESIDENT Jack M. Roehm, M.S. '35
Hagen Lane, Flossmoor, Ill.
Pullman-Standard Car Mfg. Co., 1414 Field St.,
Hammond, Ind.

VICE-PRESIDENT Le Van Griffis '37
11141 S. Longwood Dr., Chicago 43
Armour Research Foundation, 35 W. 33rd St.,
Chicago 16

SECRETARY-TREASURER Eben Vey '41
5125 S. Kenwood, Chicago 15
Illinois Institute of Tech., 3300 S. Federal St., Chicago

San Francisco Chapter:

PRESIDENT R. I. Stirton '30
745 Alvarado Road, Berkeley
Oronite Chemical Co., 38 Sansome St., San Francisco

VICE-PRESIDENT Jerome Kohl '40
53 Lenox Rd., Berkeley 7
Tracerlab, Inc., 2295 San Pablo Ave., Berkeley

SECRETARY-TREASURER R. R. Bowles '41
7960 Terrace Drive, El Cerrito
Calif. Research Corp., 576 Standard Ave., Richmond
The San Francisco Chapter meets for lunch at the
Fraternity Club, 345 Bush Street, every Thursday.

New York Chapter:

PRESIDENT Richard K. Pond '39
95 Forest Road, Fanwood, N. J.
Westinghouse Electric Co., 150 Pacific Ave.,
Jersey City, N. J.

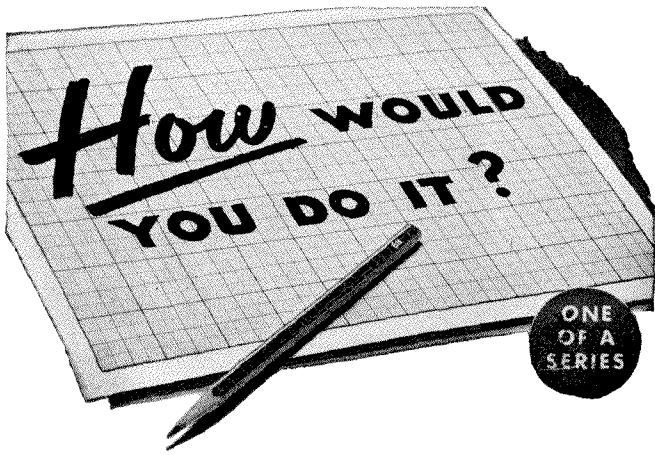
VICE-PRESIDENT Mason A. Logan '27
17 Pittsford Way, Summit, N. J.
Bell Telephone Labs, 463 West St., New York City

SECRETARY-TREASURER Erwin Baumgarten '40
302 E. Front St., Apt. B-16, Plainfield, N. J.
Calco Division, American Cyanamid Co.,
Bound Brook, N. J.

Washington, D. C., Chapter:

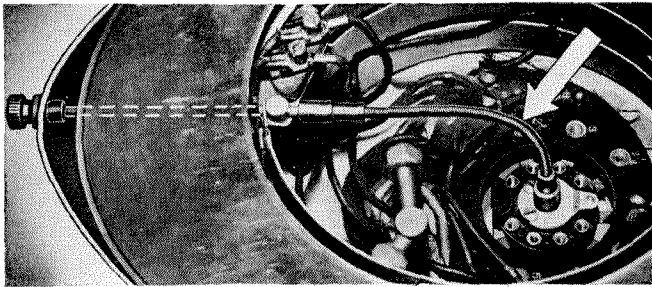
PRESIDENT James Boyd '27
Bureau of Mines
Department of the Interior
Washington 25, D. C.

SECRETARY-TREASURER P. G. Nutting '36
5112 Connecticut Ave., N.W.
Washington 8, D. C.



PROBLEM — You are designing a machine which includes a number of electrical accessories any one of which can be turned on by means of a rotary switch. For reasons of assembly and wiring this switch has to be centrally located inside the machine. Your problem is to provide a means of operating the switch from a convenient outside point. How would you do it?

THE SIMPLE ANSWER — Use an S.S.White remote control type flexible shaft to connect the switch to its control knob. This arrangement gives you complete freedom in placing both the switch and the control knob anywhere you want them. That's the way one manufacturer does it in the view below of part of the equipment with cover removed.



This is just one of hundreds of remote control and power drive problems to which S.S.White flexible shafts provide a simple answer. That's why every engineer should be familiar with these "Metal Muscles"* for mechanical bodies.

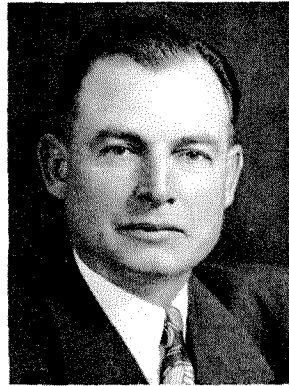
*Trademark Reg. U. S. Pat. Off. and elsewhere.

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THE S.S. White INDUSTRIAL DIVISION
DENTAL MFG. CO.  Dept. C, 10 East 40th St.
 NEW YORK 16, N. Y.



KENNETH E. KINGMAN was graduated from Caltech in 1929 with a B.S. in Chemical Engineering. After a brief period of employment with the Texas Company in its gasoline testing operations, he went to work for the Union Oil Company of California, where his experience has covered such positions as Research Chemist, Assistant Superintendent at

both the Los Angeles and Oleum Refineries, Manager of the Los Angeles Refinery for more than four years, and Manager of Manufacturing in charge of all refining operations for more than a year. In January 1951, he was elected Vice President in charge of Manufacturing.



HALLAN N. MARSH received his B.S. in 1922, then stayed on at Tech as a teaching fellow until 1923. From 1923 to date he has been with the General Petroleum Corporation of California—first in the Production Department and, from 1927 to date, in charge of the Production Engineering Section, including investigations of equipment and methods of

drilling for and producing oil. He is a former National Chairman of the Petroleum Division of A.I.M.E., and former Chairman of the Committee on Drawing and Production Practice of A.P.I. At present he is National Chairman of the A.P.I. Committee of Standardization of Pumping Equipment and Engines.



GERALD FOSTER received his B.S. in Mechanical Engineering in 1940. After graduation, he joined the staff of the Union Oil Co. as an engineering trainee. In January 1942, he enlisted in the Marine Corps, was commissioned a Second Lieutenant on completion of training at Quantico, Va., and was assigned to sea duty as Commanding Officer, Marine Detachment, USS West Point. Back on land again

in 1944, he entered Tank school and after completing

six months' training at San Diego and Fort Knox, was assigned to the 3rd Marine Division. Joining the Division on Guam, he served as executive officer of the 3rd Tank Battalion through the Iwo Jima operation.

After his release from the service in 1946, he attended Stanford Graduate School of Business from which he received his M.B.A. in 1947. Returning to the staff of the Union Oil Co., he accepted a position as a Project Engineer in the Refineries Dept. In 1948 he joined the Naval Ordnance Test Station in Pasadena, and now serves there as Technical Administrative Aide to the Associate Director for Engineering.

Discovery

THOMAS CLEMENTS, B.S. '29, Ph.D. '32, recently discovered a small collection of rocks which furnish the first proof that man lived here in California in the Pleistocene ice age—at least 15,000 years ago. Clements, who is now Hancock Professor and head of the Geology Department at U.S.C., discovered the stones in an old dry lake terrace in Death Valley. The stones had been shaped and sharpened into scrapers and blades by being struck repeatedly with larger rocks. The rough workmanship on the implements gave the clue to their age, for it was not so advanced as that of implements of more recent origin which have been found in the Mojave Desert region.

Chapter Note

THE NEXT MEETING of the Washington Chapter will be held on Thursday, April 26, following the first day's session of the American Physical Society's Spring meeting in Washington. The Chapter dinner will be held at 2400 Sixteenth Street, N. W. at 7:00 P.M. Advance reservation is desirable but not absolutely necessary. A post card to Mr. P. G. Nutting, 5112 Connecticut Ave., N. W., Washington 8, D. C., or a call to Mr. Robecheck (Hotel 2400, Telephone, COlumbia 7200) would do the trick.

Defense Minerals Administrator

JAMES BOYD '27, Director of the U. S. Bureau of Mines since 1947, now heads up the newly created Defense Minerals Administration. The agency has been set up to increase our supplies of the metals we produce ourselves, and—even more important—those we import. As the defense program has speeded up, and the steel industry has broken production records week after week, there has been a steadily increasing demand for the alloys used to strengthen steel—tungsten, manganese, chromium, molybdenum and cobalt. In this new and highly important position it will be Boyd's job to find ways of increasing output of ores from existing facilities, to develop known deposits, and to uncover new sources of supply of the metals and alloys needed to keep defense plants booming.

SIT BACK AND RELAX



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Here you get excellent service, as well as the best prices. With our established credit and banking facilities our inventory consists of any and all metal sheets, rods, forgings, or castings available on the coast and these in all alloys. We have the most modern facilities and most complete plant to give you the maximum of service, whether it is a small part, a large part, or a product from your ideas to the shipped article direct to your customer, under your name, from our plant.

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8. Engine lathes — long bed.
9. Assembly or sub-assembly work according to your specifications.
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Management, Sales, and Supervision personnel are young family men of vision and ambition, raised in the plant except for their college years. Once a customer does business with our organization—consisting of the most qualified personnel—of the finest skills and ingenuities in our field—they continue to do business with us, because they find that we do better work of real "quality" production.

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Robert A. McIntyre, M.S. '38 LOgan 5-5329
5825 District Blvd. Los Angeles 22, Calif.

Fourteenth Annual Alumni Seminar - Saturday, April 14, 1951

8:00-8:45 A.M.—REGISTRATION

DABNEY HALL OF THE HUMANITIES

MORNING PROGRAM

8:45 to 9:30 A.M.

Your choice of the following:

A. THE PHILOSOPHY OF SCIENCE

Charles Bures, Assistant Professor of Philosophy

This is for those amateur philosophers who like to think a little more deeply about science. Dr. Bures will discuss these questions:

What are some of the implications of scientific knowledge?

What does the philosopher contribute to the fields of science and engineering?

Does the engineer and the scientist need to study logic?

B. USES OF RADIOACTIVE TRACERS

G. C. Dacey, Research Fellow in Engineering

Many remarkable uses have been found for radioactive tracers in the short time that they have been available. Mr. Dacey will discuss the use of radioactive tracers in industrial, medical and other fields, and he will present information of general interest on the protection of personnel from radioactivity experiments.

9:45 to 10:30 A.M.

HIGH ENERGY PHYSICS

R. F. Bacher, Professor of Physics and Chairman of the Division of Physics, Mathematics and Astronomy.

Dr. Bacher was a member of the U. S. Atomic Energy Commission before he came to Caltech in 1949, and now leads the Institute's research program in nuclear physics and related fields. His discussion will be of great interest and everyone, including the ladies, should hear this in order to fully appreciate the synchrotron exhibit in the afternoon.

10:30 to 10:50 A.M. COFFEE TIME

10:50 to 11:35 A.M.

Your choice of the following:

A. ORGANIC CHEMISTRY AND ITS PLACE IN SCIENCE

L. Zechmeister, Professor of Organic Chemistry

New commercial products of organic chemistry are creating changes daily in our living, yet synthetic organic chemistry is little more than a century old. When we contrast its youth with the age of other sciences, we may wonder what can be expected of this field in the future. Dr. Zechmeister will tell us of the place of this rapidly developing branch of chemistry in the great structure of science.

B. AUTOMOBILE DESIGN TRENDS

Peter Kyropoulos, Assistant Professor of Mechanical Engineering.

Dr. Kyropoulos will tell us how and why body styles are being changed, what the difference is between the various automatic transmissions, and why some cars require more constant attention than others. Dr. Kyropoulos is a Technical Supervisor for the AAA's Grand Canyon Economy Run and will give us a first hand view of this year's results.

11:45 A.M. to 12:45 P.M.

OUR STRATEGIC MINERAL RESOURCES

Dr. James Boyd, Director, U. S. Bureau of Mines, Washington, D. C.

James Boyd, Class of 1927, is one of Tech's most distinguished alumni. As Director of the Bureau of Mines, he is the best qualified person to bring us the latest and most authoritative information on our strategic mineral resources.

1:00 to 2:00 P.M. LUNCH—STUDENT HOUSES

AFTERNOON PROGRAM

2:30 to 3:40 P.M. EXHIBITS

First half hour (2:30-3:00 P.M.)

Group A: BILLION-VOLT SYNCHROTRON—Optical Shop Building (West of Student Houses)

Caltech's new electron accelerator is the most powerful atom-smasher of its type ever built. It will be used in research on the nature of the forces that hold atomic nuclei together. These investigations are expected to increase our understanding of nuclear energy, which is the main source of energy of the universe. This giant machine will be on display and a guide will explain its construction and operation.

Group B: NEW ENGINEERING BUILDING

Visit the new \$555,000 Engineering building completed last year. The following exhibits warrant your special attention.

005	Viscosimeter Laboratory
0013	Spectrographic Laboratory
0018	Metals Processing Laboratory
012	Soils Testing Laboratory
106	Combustion Research Laboratory
108	Concrete Testing Laboratory
110	Materials Testing Laboratory
310	Earthquake Laboratory
312	Vibrations Laboratory

Second half hour (3:10-3:40)

Group A: ENGINEERING BUILDING

Group B: SYNCHROTRON

4:00 to 4:45 P.M.

GENES AND THE CHEMISTRY OF THE ORGANISM

George Beadle, Professor of Biology, Chairman of the Division of Biology.

We are all familiar with the "genes." The hereditary differences in men—all of them—are due to the presence, absence and combinations of about 10,000 of them in each cell. How these exert their profound influence through individual chemical effects are demonstrable by the methods of chemical genetics. Our speaker, Dr. Beadle, is one of this country's outstanding leaders in the field.

5:00 to 6:00 P.M. SOCIAL HOUR

Relax and meet your friends in Dabney Lounge.

EVENING PROGRAM

6:30 P.M. DINNER

Masonic Temple

200 South Euclid Avenue, Pasadena

Dress—informal for men and women

AFTER DINNER Introductions

Mr. G. K. Whitworth, President of the Caltech Alumni Association.

A REPORT ON THE INSTITUTE

Dr. L. A. DuBridge,

President of California Institute of Technology.

GERMANY—HISTORY IN THE MAKING

Horace N. Gilbert, Professor of Economics.

In 1945, Professor Gilbert spent four months in Germany as a member of the U. S. Strategic Bombing Survey. He returned there last year, on leave from the Institute, to accept an appointment on the staff of the U. S. High Commissioner. Professor Gilbert will present a first hand report on German recovery, and share with us some of his unique personal experiences. You won't want to miss this "welcome home" for Professor Gilbert.