

Personals

1898

Roy Beebe Blackman died on November 16, 1955, at the age of 78. His daughter writes: "After years of failing health since a critical illness, an operation, and a bad fall in Santo Tomas Internment Camp during the Japanese occupation of Manila, he went to California in 1954 for medical treatment and a change of climate, and lived with my sister and her husband in Castro Valley.

"You may recall that my father visited Caltech in 1933 during a year's tour around the world. He had always been very proud of Caltech. He spent many years in the Philippines and was one of the first American teachers in the Islands. He was also a private land surveyor and engineer.

"Father was buried with military services at the Golden Gate Cemetery in San Bruno as a Spanish-American War veteran."

1926

Henry Phillip Henderson died of a heart attack on Nov. 7 in Burlingame. He was 54 years old. Henry was with the Worthington Pump and Machinery Company and headed the sales organization for the seven western states. He is survived by his wife, a married daughter, and a son, H. P. Jr., a senior in mechanical engineering at Stanford.

Ivan L. Farman, MS '39, retired from the USAF as a Brigadier General in June, 1957, after 29 years of service. He is now a consultant to the Westinghouse Electric Corporation on worldwide military communications. He writes that his son received a BS degree last August from the U.S. Merchant Marine Academy and is now Junior Third Engineer on the U.S.S. *Steel Designer*. Additions to the family? "One 42-foot cruiser in much need of reconditioning."

1933

Wendel A. Morgan, planning engineer at the Washington Water Power Company in Spokane, writes that "my son, Donald, married a Stanford girl, Janice Graves, on September 27. He worked for Ampex Electronics last summer and is continuing to work part-time until he gets his BS degree in EE in March from Stanford. My daughter, Lois, is a junior at the University of California, Berkeley."

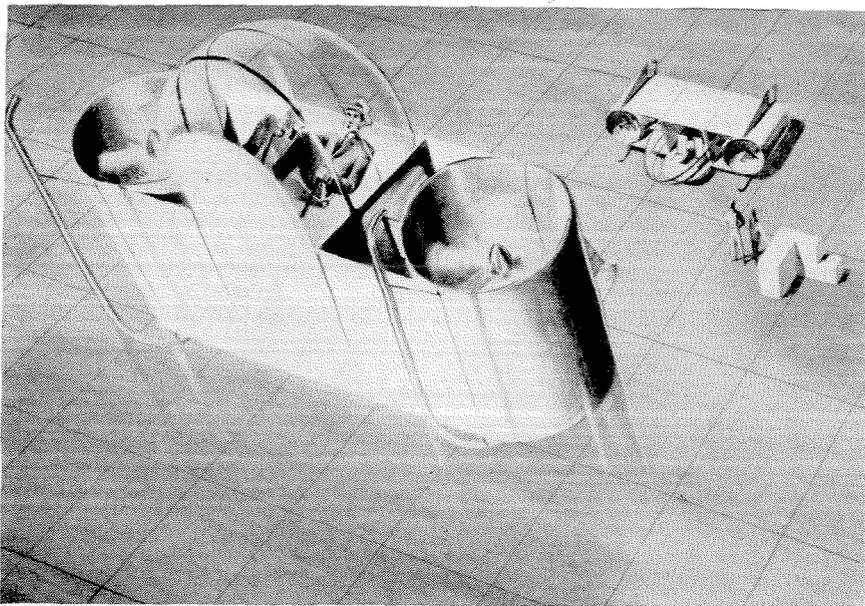
1936

Willard L. McRary, MS '37, PhD '40, professor of chemistry at the University of California at Santa Barbara, died of a cerebral hemorrhage in a Baltimore hospital on November 16. He was 44 years old.

continued on page 42

December, 1958

MARS outstanding design SERIES



rock 'n' fly

A design combining the aerodynamic principles of ring wings, ducted propulsion and elevons is the novel concept for this all-purpose utility plane that "rocks" on take-off and landing.

Resting on the ground horizontally, the plane is rocked back into vertical take-off position with partial power. It lands the same way, backing down to the ground, then forward to rest. Designer M. A. Novosel of Van Nuys also suggests a unique provision: if one engine fails, an inter-engine shaft is automatically coupled to maintain even thrust. But, most of all, this imaginative "aerial pickup" design embodies economy of operation in both fuel and space.

No one can be sure which of today's design ideas will become production realities tomorrow. But it will be as important then, as it is now, to use the best of tools when pencil and paper translate an idea into a project. And then, as now, there will be no finer tool than Mars - from sketch to working drawing.

Mars has long been the standard of professionals. To the famous line of Mars-Technico push-button holders and leads, Mars-Lumograph pencils, and Tradition-Aquarell painting pencils, have recently been added these new products: the Mars Pocket-Technico for field use; the efficient Mars lead sharpener and "Draftsman's" Pencil Sharpener with the adjustable point-length feature; and - last but not least - the Mars-Lumochrom, the new color-drafting pencil which offers revolutionary drafting advantages. The fact that it blueprints perfectly is just one of its many important features.

The 2886 Mars-Lumograph drawing pencil, 19 degrees, EXEXB to 9H. The 1001 Mars-Technico push-button lead holder, 1904 Mars-Lumograph imported leads, 18 degrees, EXB to 9H. Mars-Lumochrom colored drafting pencil, 24 colors.



J.S. STAEDTLER, INC.
HACKENSACK, NEW JERSEY

at all good engineering and drawing material suppliers

Personals . . . continued

He had been on sabbatical leave in Baltimore since last summer while he continued research at Johns Hopkins University on the parasite that causes Brazilian sleeping sickness. He and a co-worker, Elmer R. Noble, discovered an antibiotic drug during their research from 1950 to 1954 which checks the life cycle of the parasite.

He leaves his wife and two daughters—Linda Lee, 16, and Denise, 10.

1938

Robert Barry, president of Barry & Co., consulting management engineers, in Los Angeles, writes that he and his wife have just returned from a 7-week European trip. The Barrys have three children—Bill, who is a freshman at St. Mary's College; Barbara, a junior at Mayfield School in Pasadena; and Jane, who is in junior high school.

Lee Arnold, MS, has been named to fill two posts at New York University's College of Engineering. He has been appointed professor and chairman of the department of aeronautical engineering and director of the Daniel Guggenheim School of Aeronautics. Lee was formerly professor of civil engineering and engineering mechanics at Columbia Univer-

sity's school of engineering. The Arnolds, who live in New York City, have two children.

William O. Wetmore, MS '39, PhD '41, has been appointed special assistant to the vice president of Azusa Operations at the Aerojet-General Corporation in Azusa. He had formerly been vice president and director of research and development at the Hunter Engineering Company. The Wetmores live in Riverside and have two teen-age children.

1940

John W. Jackson, MS, professor of mechanical engineering at the University of Maryland, spent the academic year 1957-58 assisting in the development of a school of engineering at the Middle East Technical University in Ankara, Turkey. During this period he received a Smith-Mundt grant under the International Educational Exchange Service.

1941

Joseph P. LaSalle, PhD, writes: "I have been in the mathematics department at the University of Notre Dame since 1946 and was promoted to professor several years ago. At present I am on leave at the Research Institute for Advanced Study in Baltimore. A center

was founded here recently for the study of differential equations. As for our family—we have two children; Marc, 6, and Nannette, 8."

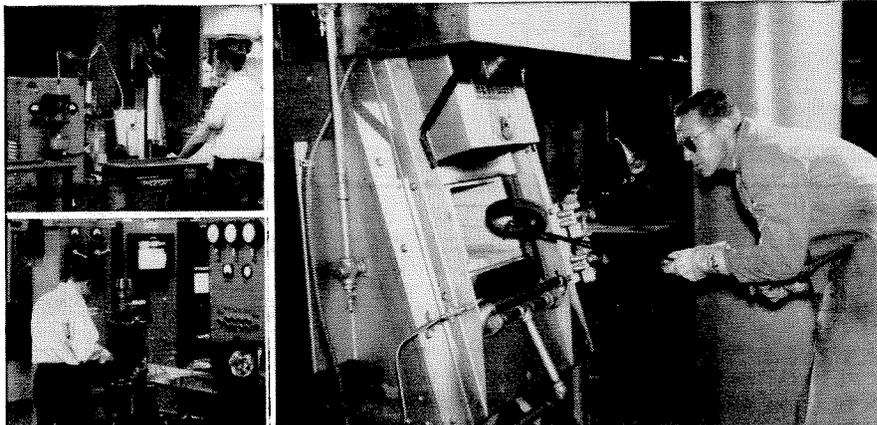
1943

Robert M. Sherwin, MS '50, ChE '52, plant engineer at the Hooker Chemical Corporation in Tacoma, Washington, writes: "When a CIT survey balloon lands practically in the back yard of an alumnus, it's news. The state of Washington, with an area of 67,000 square miles, boasts only 110 alumni. The city of Tacoma has only 4. In October, a parachute with a black metal case slightly larger than a bowling ball landed in a wooded gulch about 2,000 feet from our home. Attached to it was a letter from CIT explaining that the case contained instruments for measuring cosmic rays and that it had been launched by balloon on April 13.

"I would appreciate knowing from an informed source what the mathematical probability is of such an event."

1944

Ruben F. Mettler, MS '47, PhD '49, has been appointed executive vice president and general manager of the newly incorporated Space Technology Laboratory—*continued on page 44*



LAB ANALYST (top) operates a carbon determinator for checking carbon content of bearing steel. Bottom, technician tests ball life with ball fatigue testing machine.

CONTROLLED ATMOSPHERE FURNACE used for determining heat treating specifications in Fafnir's metallurgical laboratory.

From Fafnir Research today, the bearings you need tomorrow!

Ball bearing requirements in many areas of industry are growing fantastically complex. Materials and lubricants used in bearings today are inadequate for certain foreseeable needs. To help find answers to such vital problems, engineers at The Fafnir Bearing Company are provided with the most up-to-date facilities for ball bearing research and development, including a completely modernized metallurgical laboratory, and highly refined devices for testing bearings, bearing materials, components, and lubricants. From such resources, and unceasing

experiment, new and better Fafnir ball bearings are "born". That is why — when future progress reaches "turning points" — chances are Fafnir will have a bearing on it! The Fafnir Bearing Co., New Britain, Conn.

Write for booklet, "Fafnir Formula For Solving Bearing Problems" containing description of Fafnir engineering, research and development facilities.



Subscribe Now at Half Price*

You can read this world-famous daily newspaper for the next six months for \$4.50, just half the regular subscription rate.

Get top news coverage. Enjoy special features. Clip for reference work.

Send your order today. Enclose check or money order. Use coupon below.

The Christian Science Monitor P-CN
One Norway St., Boston 15, Mass.

Send your newspaper for the time checked.

6 months \$4.50 1 year \$9
 College Student Faculty Member

Name _____

Address _____

City _____ Zone _____ State _____

*This special offer available ONLY to college students, faculty members, and college libraries.

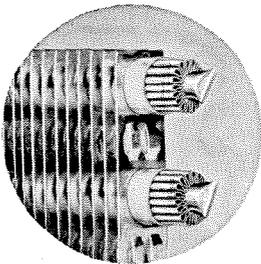
Engineering and Science

DUNHAM-BUSH

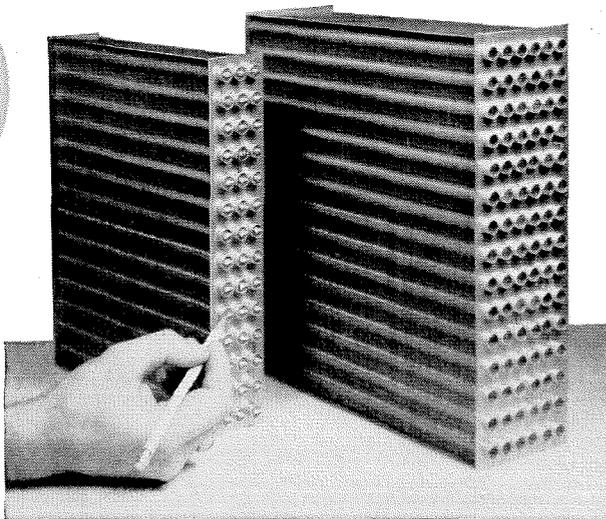
Engineered

INNER FIN*

AIR CONDITIONING, REFRIGERATION, HEATING and HEAT TRANSFER PRODUCTS



*Inner-fin tube has an "R" factor (internal coefficient) of 5.05. This spirally wound surface is an excellent turbulence promoter. It positively prevents channeling and has the highest value of overall heat transfer coefficient of all types of heat transfer coils.



Inner fin is the patented Dunham-Bush development which has revolutionized the design of heat transfer equipment. It has introduced a basic new concept of heat transfer engineering, permitting units of smaller, lighter construction.

Engineering developments such as inner-fin tubing are commonplace at Dunham-Bush . . . where progress in heating, air conditioning, refrigeration and specialized heat transfer products is an everyday occurrence.

DUNHAM-BUSH

- AIR CONDITIONING
- HEATING
- REFRIGERATION
- HEAT TRANSFER

Dunham-Bush, Inc.

WEST HARTFORD 10, • CONNECTICUT, • U. S. A.

SALES OFFICES LOCATED IN PRINCIPAL CITIES

Personals . . . continued

tories. He had served as vice president and assistant general manager of the Laboratories, which were formerly a division of the Ramo-Wooldrige Corporation. The Mettlers and their infant son, Matthew, live in Los Angeles.

1946

Lt. Col. John W. Barnes, MS, writes that he is now stationed at Fort Campbell, Ky., where he lives on the post with his wife, Mary, and three children—John, 15; Kathy, 9; and Brian, 6. He is deputy commander of the First Airborne Battle Group of the 502nd Infantry of the 101st Airborne Division. He expects to be transferred to the Pentagon in 1959, where he will probably be assigned to the Missile Division in Research and Development.

Dennis J. Ahern was released from the Navy in 1954 and has since been employed as a sales engineer by the Friez Instrument Division of the Bendix Aviation Corporation in Baltimore, Md. The Aherns have three sons.

Ludwig I. Epstein, MS '41, is now assistant professor of physics and mathematics at Lowell Technological Institute in Massachusetts.

Glynn H. Lockwood, who was a chemical engineer in the gyroscope division of G. M. Giannini & Company, is now working at the Monterey Engineering Laboratory of the Dalmo Victor Company.

1947

Louis E. Klein, MS, is now assistant director of development for the organic division of the Monsanto Chemical Corporation in St. Louis. The Kleins and their three children, Susan, Billy and Jane, have recently moved into a new house in the suburbs of St. Louis.

1948

Wakefield Dort, Jr., MS, writes that he "spent the summer of 1957 in northern Idaho, resulting in the 1958 publication of 'Gold-Bearing Gravels near Murray, Idaho' as pamphlet 116 of the Idaho Bureau of Mines and Geology. I spent the summer of 1958 mapping geology in central Pennsylvania. I'm still associate professor of geology at the University of Kansas."

1949

Vernon L. Smith was promoted to associate professor of economics at Purdue University in July. In September, he began writing a book on the theory of investment and production, on a Ford Foundation Faculty Fellowship. Vern also co-authored a book this year called *Economics, An Analytical Approach*, and wrote several articles on subjects in eco-

continued on page 46

Engineering and Science

ENGINEERS PHYSICISTS MATHEMATICIANS

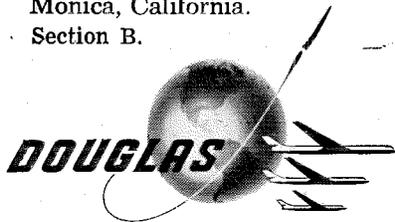
Douglas diversification affords broadened opportunities, combined with stability and security.

Engineering at Douglas is divided into three basic areas . . . missile and space systems, transport aircraft and combat aircraft. In these military and commercial categories, each advancing beyond present frontiers of achievement, engineers and scientists can progress to the limit of their capabilities.

In addition, supervisory and executive openings are filled from within the company. Many of the top executive officers at Douglas are engineers who have moved right up to assume wide responsibility.

We are interested in engineers with backgrounds in other fields as well as avionics, aircraft and missiles.

For further information write to Mr. C. C. LaVene, Douglas Aircraft Company, Inc., Santa Monica, California, Section B.



the most respected name in aircraft,
missile and space technology

Personals . . . continued

nomics, econometrics and mathematical economics.

1950

John R. Reese, MS, division geophysicist for the California Company, was transferred from Denver to Jackson, Mississippi, last year. The Reeses have a daughter, Susan Virginia, 8 months old.

Richard D. DeLauer, AE, PhD '53, on the staff of the Los Alamos Scientific Laboratory in New Mexico, is co-author of *Nuclear Rocket Propulsion*, published by McGraw-Hill this fall.

Breck Parker has left the U.S. Bureau of Mines office in Denver to join the exploration staff of the Homestake Mining Company. He still lives in Denver.

Bruce B. Stowe, lecturer on botany at Harvard University, now has two children—Mark, 2½ and Eric, 6 months.

1951

Robert E. Cobb writes from RMS *Queen Mary* that "my family and I are on vacation after two years in Turkey for Socony Mobil. Spent a few days in Brussels (to see the fair) and Madrid (to see the bullfights) and Lisbon (to just rest) on our way back to the States. At the moment we're en route back to Ankara. I was recently promoted to staff geologist from geological party chief. This means I theoretically spend most of my time in the office rather than in the field."

1953

Rolf Hastrup, MS '54, ME '58, writes that he now has his first permanent job with the Aerojet-General Corporation in Sacramento as a design engineer—and is moving into his first home with his first child, Stefan, born on September 22.

1954

Bruce H. Morgan, MS, is in his second year of teaching sophomore physics as an assistant professor at the U.S. Naval Academy. He will be married to Olivia Denniston of Annapolis on December 27.

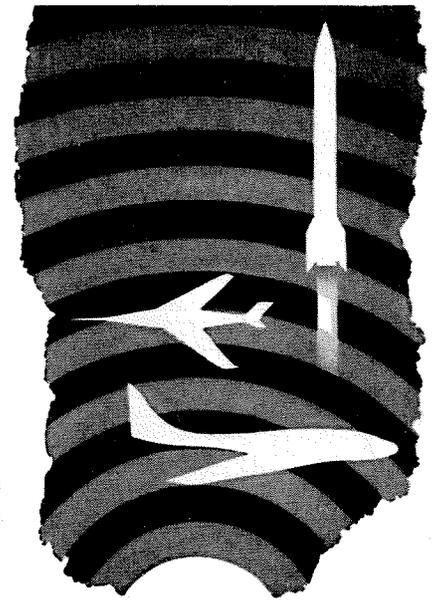
1955

Bruce J. Rogers, PhD, associate professor of plant physiology at Purdue University in Indiana, now has a son, Christopher, 8 months old.

1956

H. Mark Goldenberg, who received his MS from Harvard last summer, and is now studying for his PhD there, was married to Evelyn Baker of Salem this fall.

Robert I. Jetter, graduate student in mechanical engineering at Stanford, was married recently to Elizabeth Hoy of Pasadena.



Thousands of ITT engineers are "space men"

NOT literally, of course, but they are engaged in so many electronic activities associated with the vast air world above us that they might well be broadly identified as "space men."

Many have achieved a high record of success in research, design, production, testing, and field engineering of air navigation and traffic control systems . . . including ILS, Tacan, Vortac, Data Link, VOR, DME, Navascreen, Navarho, and automatic "typewriters" serving the Narcast system for in-flight weather reporting.

Other ITT "space men" are making important contributions to air reconnaissance, inertial navigation, infrared, missile guidance and control, electronic countermeasures, radio communications, radar, scatter communications, and other categories vital to national defense.

These are only a few of the many activities at ITT laboratory and production centers—coast to coast—where challenging problems are constantly opening the way to top careers.

Consult your College Placement Officer for interview date, or write to ITT Technical Placement Office, 67 Broad Street, New York 4, New York.

INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION



67 Broad Street • New York

Engineering and Science