

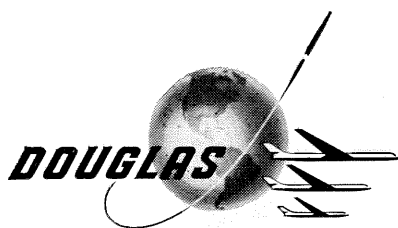
Arthur E. Raymond, Senior Engineering Vice President of Douglas, goes over a proposed lunar trajectory with Maxwell Hunter, Asst. Chief Engineer—Space Systems

Guided tour of the solar system

The new NASA Thor-boosted research rocket, DELTA, now in production at Douglas, will set up important signposts for further space explorations.

Combining elements already proved in space projects with an advanced radio-inertial guidance system developed by the Bell Telephone Laboratories of Western Electric Company, DELTA has the versatility and accuracy for a wide variety of satellite, lunar and solar missions. Douglas reliability rides with these 90 foot, three-stage rockets on every flight.

Douglas is now seeking qualified engineers, physicists, chemists and mathematicians for programs like ZEUS, DELTA, ALBM, GENIE, ANIP and others far into the future. For full information write to Mr. C. C. LaVene, Douglas Aircraft Company, Inc., Santa Monica, California, Section B.



MISSILE AND SPACE SYSTEMS ■ MILITARY AIRCRAFT
DC-8 JETLINERS ■ CARGO TRANSPORTS
AIRCORB ■ GROUND SUPPORT EQUIPMENT

Personals

1926

C. Hawley Cartwright, PhD '30, writes from Indianapolis that, since the first of the year, he has been taking on jobs as a consulting physicist, and that his first job is a six-month-long project.

1930

Edward E. Kinney, MS, says he's "just living the life of Riley, having retired from Michigan State University after 38 years service. My wife and I just returned to our winter home in Florida after a nine-day cruise through the West Indies."

James H. MacDonald, owner-president of Magparts in Azusa, writes that the company has moved into its own building. They've been making magnesium castings for ten years now and are currently running parts for the old Corporal missile. Jim reports that he has five and a half grandchildren—5 of them boys.

1932

James C. Mouzon, PhD, is now associate dean of the college of engineering at the University of Michigan, where he has been a professor of electrical engineering since 1957. Jim has two married daughters and two grandsons.

Jack M. Roehm, MS, has been made vice president for research and development of the Kawneer Company in Niles, Michigan. He joined the company in 1953.

Charles M. Blair, PhD, is now a director of the Mercantile Bank and Trust Company in St. Louis, Mo.

1935

Alan Beerbower, MS '36, has been appointed a research associate by the Esso Research and Engineering Company in Linden, New Jersey. The position of associate is awarded to scientists with outstanding technical ability. Alan has been with Esso since 1936, and his current research is on aviation oils.

1937

John R. Austen has been appointed assistant general manager in charge of the compressor division of the Ingersoll-Rand Corporation plant in Phillipsburg, Pa. He was formerly assistant to the general manager. He will now be responsible for engineering, manufacturing and customer service activities for all of the division's products.

Foster C. Bennett, MS, is president of the midwestern section of the American Die Casting Institute in Midland, Mich., and is also on the Institute's national board of directors. He holds down the chairmanship of the Die Casting and

Permanent Mold Division of the American Foundrymen's Society too. Next May he will be a delegate to the International Die Casting Congress at Stresa, Italy.

"I have seven children," he writes. "The oldest won a five-year cooperative scholarship at Cincinnati this year and the second boy will be in college before long. I don't run into people from Caltech in my business—guess they are all in electronics!"

Daniel G. Schuman is now controller of the Bausch & Lomb Optical Company in Rochester, N.Y. He was formerly vice president and controller of the Stromberg-Carlson Division of the General Dynamics Corporation.

Le Van Griffis, MS '38, PhD '41, is now dean of engineering at Rice Institute in Houston, Texas. He was formerly at the Borg-Warner Corporation's research center in Chicago.

1938

Frank B. Jewett is now president of the Vitro Corporation of America. He joined Vitro in 1956 after eight years with General Mills, Inc., where he directed engineering, research and development.

David K. Beavon is now assistant superintendent of Texaco's Lockport, Ill., refinery. He was formerly in the process and production division in the New York office. Dave has been with Texaco since 1938.

1939

Stephen C. Clark, test officer at L.A. State College, has taken a leave of absence to serve as research associate with the State Research Department of the California Teachers Association. He is serving under *Garford G. Gordon*, '34, assistant director of research. Steve has also been working part-time in the applied mathematics section at Electro-Data, programming statistical applications. He writes that *Munson Dowd*, '38, engineer with the Metropolitan Water District, lives just down the block from him in Altadena.

James E. Stones, formerly geophysics supervisor at the Superior Oil Company in Los Angeles, is now with the production and exploration department of the Monsanto Chemical Company's Lion Oil Company Division at Midland, Texas.

Willard M. Snyder, airplane pilot with the Bureau of Reclamation in Billings, Montana, writes that "the life, fishing, hunting and square dancing are great in Montana; we like it here."

A. Martin Eichelberger, MS, has re-

continued on page 48

Personals . . . continued

signed from the Aero Service Corporation in Philadelphia and has joined the management consulting firm of Dibrell and Company, Inc., in the same city, as a participating partner and executive vice president for market development.

1940

William C. House has been made director of systems management at the Aerojet-General Corporation in Azusa, to coordinate the work of the company's separate systems and space technology divisions. Bill, who has been with Aerojet since 1949, recently returned from a year's leave of absence with the Advanced Research Projects Agency in Washington, D.C., where he was assistant chief of the space technology branch for advanced programs.

Richard W. Powell, MS '47, is now manager of Aerojet-General's Avionics Division in Azusa. He has been with Aerojet since 1950.

1941

Alfred Schaff, Jr., has been appointed executive vice president and general manager of the Allegany Instrument Company in Cumberland, Md. He had been working for Aerojet in Sacramento,

in technical and management positions—including test and technical services on important rocket and missile programs.

1942

Robert J. Clark, MS '43, writes from Geneva, Switzerland: "I'm still director of European operations for North American Aviation, Inc. We've been here three years now and enjoy our town and the country. During the winter we manage to spend a fair amount of time skiing at Gstaad, three hours from here.

"I've been elected president of the American Men's Club of Geneva for 1960. We have about 400 members, of whom about 1/3 are non-American. Although this is not a bargain paradise and we pay Swiss taxes of several varieties, there are still about 280 American businessmen in Geneva—and we're still growing.

"*Fred Felberg*, '42, MS '45, and his wife were over last year and we had a get-together after the wind tunnel conference was over."

1943

Edward P. Fleischer, formerly assistant to the president of the electro mech-

anical instrument division of Consolidated Electrodynamics Corporation in Pasadena, has been appointed assistant director of the division. In the newly created post, he will be responsible for manufacturing operations. Ed has been with the company since 1951.

Redgnald D. Bushell, MS, is now assistant manager of the eastern region of the sales department of the Ethyl Corporation. He has been with the company since 1938, and his most recent assignment was as manager of the New York district of the sales department.

1944

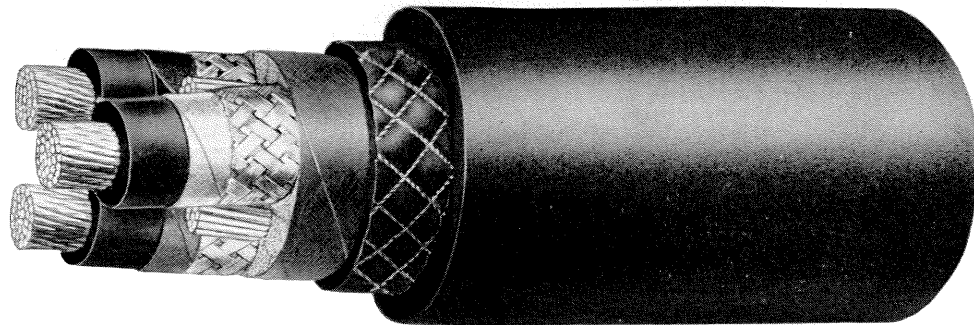
Donald T. Greenwood, MS '48, PhD '51, is associate professor at the University of Michigan in Ann Arbor and is teaching in the graduate instrumentation engineering program. He's been there since 1956. The Greenwoods have two children—Anne, 5, and Brian, 3.

Comdr. Bradley Ballard, Jr., BS, MS, is engineer in charge of seats and underbodies at the Fisher Body Division of the General Motors Corporation in Birmingham, Mich. The Ballards have three children—Diana, 1; Pam, 9; and Jimmy, 7.

continued on page 52

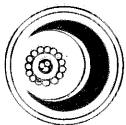
CRESCENT

TYPE SH-D - 5000 VOLT TRAILING CABLE



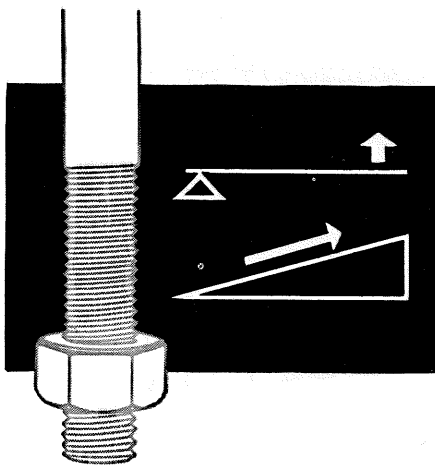
For supplying power to electric shovels, dredges, etc.
Shielded to assure protection to personnel and equipment.

CRESCENT Wires and Cables are produced with modern equipment to the most exacting specifications. Every foot is subjected to searching electrical tests during manufacture and in the finished form.



CRESCENT INSULATED WIRE & CABLE CO.
TRENTON, N. J.





Take advantage of the **MECHANICAL ADVANTAGE**

The screw is a combination of two mechanical principles: the lever, and the inclined plane in helical form. The leverage applied to the nut combines with motion of the nut around the bolt to exert tremendous clamping force between the two.

One of the greatest design errors today, in fact, is failure to realize the mechanical advantages that exist in standard nuts and bolts. Smaller diameters and less costly grades of fasteners tightened to their full capacity will create far stronger joints than those utilizing bigger and stronger fasteners tightened to only a fraction of their capacity. Last year, one of our engineers showed a manufacturer how he could save \$97,000 a year simply by using *all* the mechanical advantages of a less expensive grade.

When *you* graduate, make sure you consider the mechanical advantages that RB&W fasteners provide. And make sure, too, that you consider the career advantages RB&W offers mechanical engineers—in the design, manufacture and application of mechanical fasteners. If you're interested in machine design—or sales engineering, write us for more information.

RUSSELL, BURDSALL & WARD
BOLT AND NUT COMPANY
Port Chester, N. Y.



Personals . . . continued

1945

Ralph S. White is now general manager of the Electronic Systems Development Corporation in Ventura, a subsidiary of Solar Aircraft. Before joining the company, he was assistant to the division manager of Beckman Instruments' Spinco Division, in Palo Alto.

Col. Lawrence Ely, MS, special assistant to the Deputy Commander for Military Space Systems at the AF Ballistic Missile Division in Inglewood, is technical advisor for the "Men into Space" TV program on CBS. His job is to check everything from space suits and missile instrumentation to uniform insignia and military haircuts.

1945

William S. Tatlock died of multiple sclerosis on January 14 in Delaware City, Del. He was 44. He had been employed by the DuPont Company since 1950 and his main interests were in the organosilicic acids and silica. He had several US patents to his credit. Bill served in the US Navy from 1943 to 1946 and received his PhD in chemistry in 1951 from Harvard University. He is survived by his wife, Carol.

1947

Robert Ilfeld, MS, has been president of the Quick Industries in Jackson, Michigan, for the past five years. The company's plastics division (extrusions) will build a new plant this spring, for use by early summer. Bob founded the plastics business in 1956 and it has grown tremendously in the past 18 months. The Ilfelds have four children—Ricky, 13, (born in Pasadena, while Bob was at Caltech); Kathy, 10; Martha, 7; and Ellen, 4. Bob was recently elected to the local school board and is serving his fifth year on the Community Chest Board.

1948

James C. Elms is now vice president and general manager of defense operations in the Crosley Division of the AVCO Corporation. He was formerly vice president of ground electronics and communications. Before joining Crosley almost a year ago, Jim was manager of the avionics department of the Martin Company in Denver. The Elms' and their four children live in Cincinnati.

1951

Rex Ragon is now working as a seismologist at the Precision Exploration Company in Houston, Texas.

Robert E. Cobb writes that he's "still working as a staff geologist with Mobil Exploration Mediterranean in Ankara. Our second girl, Vivian Nell, was born on November 13 and will be exhibited

to her grandparents this summer when we take our long vacation."

1954

Roland Miller and his wife announced the arrival of a son, David Lawrence, on January 26. Roland is a project engineer with William D. Coffey Associates, Inc., in Los Angeles.

Howard L. Crosswhite is now senior engineer at the Ford Motor Company in Detroit, where he has worked since he graduated from Caltech. He has a daughter, Linda, 4, and a son, Steve, 1.

William A. Nevill, PhD, has been promoted to associate professor of chemistry at Grinnell College in Iowa.

Henry Gershowitz, writes that he has been appointed serological consultant to the blood bank of the University of Michigan Hospital and that he and his wife have a new daughter—their third child.

1955

Donald R. Petersen, PhD, writes that he's working in the chemical physics research lab of the Dow Chemical Company in Midland, Mich., on the applications of digital computers to chemical process control. The Petersens have two children—Karen, 5, and Eric, 2.

Roger De Wiest, MS, writes that he got his PhD in civil engineering in 1959 at Stanford and is now assistant professor of geological engineering at Princeton.

1956

John M. Manville, graduate student in astrophysics at the University of Colorado, recently announced his engagement to Nancy Koontz, a research assistant at Harvard Medical School. The wedding will take place in Los Alamos on March 26th.

1957

Alan Farley writes that "I passed the doctoral preliminary exams last fall and am looking around for a thesis topic in topology. Also, I am now awaiting the galley proofs from Dover of my translation of Alexandroff's *Einfachste Grundbegriffe der Topologie* which is soon to be published. I originally did the translation for L 35 at Caltech."

1958

David J. Wilson, PhD, instructor in chemistry at the University of Rochester in N.Y., has received a grant of \$10,000 from the Research Corporation for exploratory research in any field of chemistry he chooses. Last August, Dave was named director of a basic research project entitled "proton magnetic resonance study of molecular processes" under a \$10,500 grant from the National Science Foundation.