

# Battle of Production

**Oklahoma's engineering alumni are found hard at work in all phases of the fight to speed the production of war necessities**

**A**MERICA'S industries are being geared to produce war material on a scale never before even visualized, and the nation's engineers are fighting a crucial battle of production while the armed forces meet the foe in combat.

A survey made in February for *Sooner Magazine* reveals that the more than 2,000 graduates of the College of Engineering at the University of Oklahoma are scattered through practically every phase of this huge battle for production.

Both faculty and alumni of the O.U. College of Engineering have responded wholeheartedly to the need for trained men both in industry and in the armed service.

During the last year three engineering faculty members resigned to go into work related to national defense. C. T. Langford, chemical engineering, is doing special work in the United States Chemurgic Laboratories on the development of synthetic materials. N. E. Wolfard, civil engineering, is making precise surveys in connection with army camp layout. J. W. Donnell, chemical engineering, is engaged in chemical warfare plant construction and operation.

Engineering faculty members who have taken leave of absence to serve in the armed forces are: Capt. C. T. Almquist, Ordnance Department; Capt. A. P. Challenner, Signal Corps Research Department; Lt. H. K. Bone, Ordnance Department; Lt. D. O. Nichols, Ordnance Department Research; Lt. C. N. Paxton, Naval Aviation Research; Lt. F. C. Morris, Navy.

Last June Fred Jones, manager in Oklahoma for the Office of Production Management, was authorized to commission Dean W. H. Carson to organize the Division of Contract Distribution Service in Oklahoma. Dean Carson went to Washington and conferred with Mr. Knudsen and various department heads, after which the Oklahoma City office was officially opened June 15. Dean Carson resigned from the O.P.M. service September 1 to resume his duties at the University.

During last summer L. A. Comp, assistant professor of mechanics, did special research in the use of electric strain gauges at the Douglas Aircraft Company's main plant in Santa Monica, California.

R. V. James, chairman of the department of mechanics, has administered the program of specialized defense courses at the University, sponsored by the U.S. Department of Education, and also has had charge of the extensive Civilian Pilot Training Course.

Clyde L. Farrar, associate professor of electrical engineering, and technical advisor of WNAD, was selected by the U. S. Department of Education to take a special three-weeks course in electronics at Massachusetts Institute of Technology recently, and is now conducting night classes in radio sound detection which have vital military value.

Last summer Herschel Elarth, associate professor of architecture, made a survey in Washington and along the eastern seaboard for the American Institute of Architects on civil defense with special emphasis on bomb shelters. H. L. Kamphoefner, professor of architecture, was associated with the Naval Bureau of Yards and Docks last summer as associate architect and was engaged in designing Navy hospitals.

**O.**U. engineering graduates are engaged in a great variety of industrial work connected with production of war materials. It is not possible to give a complete list, but the following information provides an interesting cross-section of what they are doing.

Leo Gorton, E.E. '13, is owner of the Machine Tool and Supply Company at Tulsa which is handling a variety of machine tools that are vital for production of war materials.

I. X. Calhoun, M.E. '28, who has a manufacturing plant of his own in Oklahoma City, has had a number of sub-contracts calling for precision work on articles such as hydraulic unit for a bomber landing gear.

W. L. Ducker, Jr., M.E. '30, who was engineer during the summer for the Division of Contract Distribution, O.P.M., State of Oklahoma, was promoted to manager when Dean Carson resigned his connection with the O.P.M. last September.

Dave E. Fields, M.E. '25, is vice president and general manager of the Tulsa Boiler and Machinery Company, which is handling a considerable volume of defense work.

Several M.E. graduates are making important contributions in the field of aeronautics. Richard L. McBrien, M.E. '33, is flight research engineer with United Air Lines. W. K. Ritter, M.E. '29, is research engineer on internal combustion engines for the National Advisory Committee of Aeronautics, Washington, D. C. Earl Bar-

tholomew, M.E. '22, is chief executive engineer of the Ethyl Gasoline Corporation, Detroit, Michigan, and R. B. Sneed, M.E. '34, and A.E. Huffman, M.E. '39, work with him in developing aviation fuels.

Dave Abernathy, M.E. '38, is superintendent of utilities at the Hope, Arkansas, Proving Grounds of the Ordnance Department.

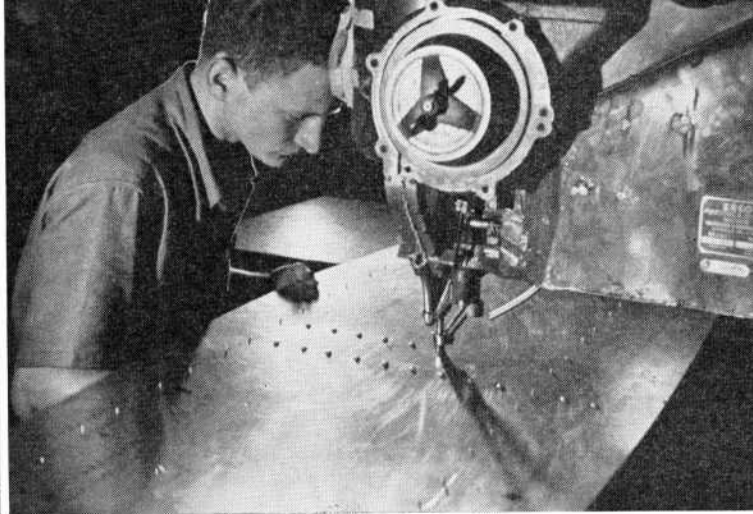
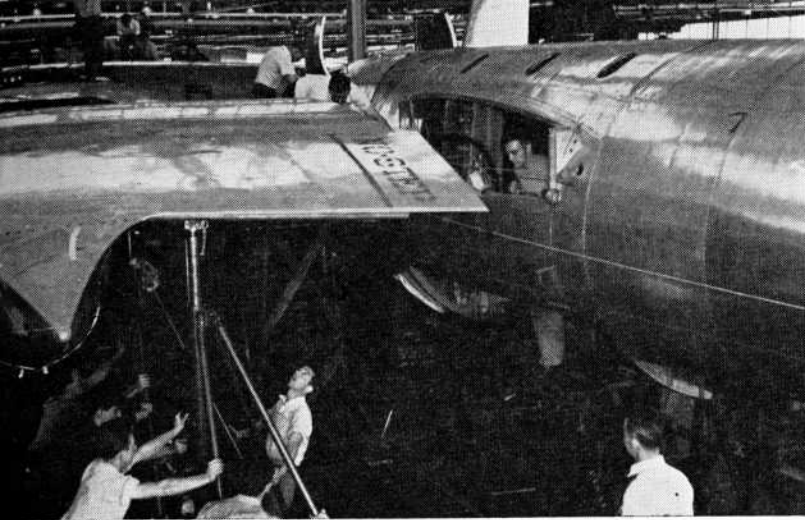
In the vital effort to produce an adequate supply of motor fuel for military and industrial needs, many chemical engineering graduates from O.U. are filling research and executive positions. W. C. Patterson, Chem. E. '36, and J. H. Weiland, Chem. E. '36, are research and development engineers for the Texas Company. S. L. Reebergh, Chem. E. '36, is with the Gulf Refinery at Port Arthur, Texas. Hampton Corneil, Chem. E. '37, who has been employed by the Humble Oil and Refining Company since graduation, has carried out several investigations on reduction of evaporation loss from storage tanks.

Carl Cooper, Chem. E. '37, has completed work for a Ph.D. in chemical engineering at Massachusetts Institute of Technology and is employed in the Research Laboratory of the Phillips Petroleum Company in Bartlesville. Charles Hetherington, who received a master's degree from O.U. last spring, is at M.I.T. on a scholarship, working toward a doctor's degree in chemical engineering.

Although out of the University only one year, Leldon L. Stockton, C.E. '41, is already in field charge of the construction of marine loading docks and the erection of a power house in the vicinity of Southern California. After completing requirements for graduation in January, he began work with Columbia-Brown-Root, the builders of the huge Naval air base at Corpus Christi. He was promoted to a position with the parent firm, the Columbia Construction Company, and was transferred to the West Coast.

William M. Marriott, C.E. '35, has important—and confidential—duties with the Federal Power Commission which regulates phases of the electrical industry and its relation to defense. Mrs. Marriott is the former Bessie Kniseley, who was engineers' queen at O.U. and later graduate student and faculty assistant at the University of California.

John W. Bond, C.E. '32, is superintendent and engineer for the Manhattan Construction Company, which is engaged in a number of defense projects. On shell loading projects are two new graduates: Harold Eugene DeShurley, C.E. '42, and James H. Will, C.E. '42.



#### ENGINEERING SKILL SPEEDS PLANE PRODUCTION

*A wing section is being joined to the body of a bombing plane in the picture on the left. Right, a giant power riveter is speeding work on the B-26, medium bombing plane for the U.S. Army Air Corps. (Both photographs, Martin from OEM.)*

Because of the civil engineers' training in stress analysis and structural design, many of them are in aircraft manufacture and design. Matt X. Beard, C.E. '40, is with the Boeing Aircraft Company, Seattle. Frank L. Best, C.E. '35, is manufacturing supervisor for Boeing Aircraft's plant at Wichita, Kansas. His previous experience in the manufacture of high pressure tanks and oil field machinery qualifies him for important defense work.

Gordon R. Steinhoff, C.E. '37, remembered by O.U. friends as "the artist with the draftsman's pen," is with the Stearman Aircraft Company, Wichita, and is reported advancing rapidly in the field of aircraft drafting and design.

"One of the best purchasing agents in the country" is the way a business man described John G. Milliken, C.E. '20, who is with Dunning, Patterson and James, contractors for an airport project at Oklahoma City.

The area around Tulsa and to the east is the center of much defense activity, and adequate transportation facilities are imperative. Acting for the U.S. Engineers is Maynard G. Fuller, C.E. '30, who is responsible for the design and location of roads and highways in that section.

Many O.U. civil engineers are in the Federal Civil Service and rendering skilled technical service that of necessity must be kept secret. This list includes John H. Fredrickson, Jr., C.E. '32; Harold E. Wehrenberg, C.E. '37; Stuart R. Merwin, C.E. '37; Fred S. Marks, C.E. '39; James H. Morton, C.E. '40; Aaron Alexander, C.E. '40, and Jerome Wolf, C.E. '39.

Petroleum engineer graduates are doing work that is of obvious importance to the nation's war efforts.

J. Harold Adkinson, P.E. '30, and Phil J. Lehnhard, P.E. '31, hold responsible positions with Dowell, Inc., which specializes in acidization of oil wells to increase production. George P. Livermore, P.E. '31, and Lewis H. Mack, P.E. '36, are engaged in oil well drilling in the Mid-Continent area. Pat E. Fletcher, P.E. '35, is district

production engineer for the Atlantic Oil and Refining Company in East Texas.

James M. Miles, P.E. '34, is division production engineer for Cities Service in East Texas. William F. Matheny, P.E. '35, is in charge of gasoline plant design for Phillips Petroleum Company. James C. Conner, P.E. '40, is working in the production engineering department of the Stanolind Oil and Gas Company.

One of the nation's production problems is to train additional young engineers, and several of O.U.'s petroleum engineer graduates are in the engineering teaching profession. George Latham Yates, P.E. '34, is on the petroleum engineering faculty at the University of Pittsburgh. Sylvan Cromer, P.E. '37, is teaching petroleum engineering at Louisiana State University.

Electrical engineers are solving a variety of war production problems. Phillip H. Entz, E.E. '41, is working on aircraft development at Wichita, Kansas. Russell B. Houghton, E.E. '39, is with a special electronics group in London, England. Edwin Page, E.E. '38, is a specialist on precision gauges for the Office of Chief Ordnance, Washington, D. C.

Dayle O. Collup, E.E. '42, is working on microwave development in the Naval Research Laboratory, Anacostia. Doyle E. Collup, E.E. '42, is in aircraft radio development work at Patterson Field, Dayton, Ohio. Maurice Prescott, E.E. '24, is a radio development engineer assigned to aircraft radio research work for the General Electric Company, which has numerous war material projects.

John Bender, E.E. '34, is with the Emerson Electric Company at St. Louis, Missouri, working on bomber turret design. This company, one of the largest manufacturers of electric fans, has gone over entirely to defense contracts. Harley Coon, E.E. '39, with the General Electric Company, is assigned to designing substations and generating equipment for T.V.A.

Frank Ault and Thomas J. Buchanan, both E.E. '40, are engineer inspectors in East Coast shipyards. Thomas Black, E.E.

'40, is working on radio defense orders for the General Electric Company.

The airplane industry has attracted many O.U. men. P. O. Tauson, M.E. '34, is with the Bell Aircraft Corporation, Buffalo, New York, and has charge of a department that is responsible for solving particularly hard problems in structural analysis. Cecil Armstrong, M.E. '32, is with the Lockheed Aircraft Company in California as senior research engineer.

The Boeing Aircraft Company, builders of the famed flying fortress, have advanced to key positions in their organization several Sooner engineers, including Wilfred Pearce, General Engineering '37; Robert L. Roark, M.E. '37, and John Riley, M.E. '39.

William Gordon Stuart, M.E. '39, is chief structural engineer of Spartan Aircraft, Tulsa, builder of Navy training planes, a company which has many O.U. graduates on its staff.

William A. Woods, E.E. '29, is radio engineer for Hughes Aircraft Company in California. Leonard Allen, M.E. '37, is chief engineer for Solar Aircraft Company, manufacturer of aircraft equipment, in California.

Dan Redwine, M.E. '40, and Bob Kahn, M.E. '41, of Consolidated Aircraft, were among a select group of engineers sent from the company's plant in California to Detroit to study special manufacturing methods, and from there will be transferred to a new assembly plant in Texas.

Many of the engineering graduates in the armed services are assigned to engineering research. Thomas Mayrath and Robert L. Mayrath, twins who received M.E. degrees in '33 and who are both lieutenants in the Army Air Corps, are in experimental engineering work at Wright Field in Ohio. Leo Thomson, M.E. '41, is a junior aeronautical engineer in assembly and repair at a Naval air station in the Pacific.

Graduates in General Engineering are engaged in varied defense activities. Some are building mechanical war equipment,

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# Battle for Production

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some are producing the fuel to run them, and others are using the weapons. Ronald Jones, G.E. '41, is doing research for Dow Chemical Company on the welding of magnesium alloys, which are widely used in airplanes, and another Sooner, Howard A. Leeser, G.E. '40, is with Curtis Wright Airplane Company in New York. Booth Strange, G.E. '37, is with a geophysical party in Mississippi seeking new sources of petroleum production. James R. Marty, G.E. '34, is petroleum production engineer for E. H. Moore of Ada. Allyn Hale, G.E. '37, is in the steel castings department of Hughes Tool Company in Texas, which is furnishing steel castings for defense production.

John Ringer, P.E. '41, is with Consolidated Shipbuilding Corporation, in Texas. Although he started with the company as an arc welder, his college education soon secured a transfer to an engineering position and he is now engaged in the design and installation of ventilating systems in large cargo ships.

After an intensive period of instruction at Rock Island Arsenal, Bill Pratt, M.E. '41, is working as an inspector of war materials for the government, in East Texas.

Architectural graduates are greatly in demand because of the large amount of defense construction work under way.

Lt. Frank C. Morris, A.E. '26, on leave from the engineering faculty, is working on naval construction in the Gulf area. Ross W. Morrison, A.E. '28, was expecting last month to be called to duty in the Army. Capt. Maurice Hefley, A.E. '31, is supervising the drafting of work drawings and the construction of a large dock project on the East Coast.

Lawrence Plank, A.E. '32, is with Coth and Goss Constructors and is in defense construction work. C. L. Holmes, A.E. '34, has been with the Army Engineers in Washington, and was transferred to the Quartermaster's Office to work on instruments for army housing.

Robert Moore, A.E. '34, has worked as architectural draftsman for a number of firms handling housing or other defense work. Sue Aycock Turnbull, A.E. '36, has a close interest in defense projects as her husband is an engineer and architect working on bomber depots and other similar projects.

Mark Miller, A.E. '36, and Keith I. Hibner, A.E. '39, are with Albert Kahn's firm in Detroit, Michigan, a firm of architects which has handled nearly a billion dollars of defense work. Milton Gordon, A.E. '38, is working as draftsman for Prack and Prack of Pittsburgh, Pennsylvania, who recently completed plans for the new Lone Star Ordnance Plant for the government.

Mansel Kersey, A.E. '38, Paul H. Harris, F.A. '39, and Will A. Thomas, A.E. '40,

are working for the NYA at Russellville, Arkansas, on plans for defense education training schools. G. Milton Small, A.E. '39, is working as draftsman for the office of Pierre Ghent, City Planners, in Washington, D. C., and has been engaged in detailing plans for defense housing projects.

Joe N. Boaz, A.E. '40, is employed as associate architect by the War Information Office of the Navy in Washington, D. C., and is doing confidential work. John Knight, A. E. '41, is employed as junior architect by the Bureau of Yards and Docks of the Navy in Washington. He has helped in the preparation of plans and model studies on the new Naval base at Trinidad, and recently won a competition for a poster to be used in defense plants throughout the nation.

Robert L. King, A.E. '41, is also employed by the Bureau of Yards and Docks and has been working on plans for new Naval base buildings and bomb proof shelters.

Only woman in the large office of the Army Engineers at Galveston, Texas, Ruth Julia Tappan, A.E. '41, is working as junior draftsman on plans for army construction in the Gulf area.

Now serving as officers in the nation's armed forces are John H. Byrd, A.E. '38; C. Morrison Stephens, A.E. '38; C. Julian Vahlberg, A.E. '41; Gail R. Palmer, A.E. '41, and Charles W. Himes, Landscape Engineering '38.

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## Civilians' Guide

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robe on hand by making over, dyeing or adding new accessories. Suits of men already in service can be made over into suits for women and children.

### SUGGESTIONS ON FIRST AID PRECAUTIONS IN HOMES

By ALMA J. NEILL  
*Professor of Physiology*

DO

1. Find out from your county Red Cross chairman when instruction will be given in first aid and enrol in a class. "Civilians, especially women, should know simple first aid treatments," Miss Neill advises. "This war is chiefly a war from the air and women may have to care for wounds and burns caused by bombs in their own homes."

2. In Miss Neill's opinion, every civilian should know how to care for cuts, wounds and burns, how to make splints for broken bones and transport bodies out of wreckage and debris. In the medicine chest of every home, the following items should be kept: a flashlight, triangular bandages and lots of clean white cloth, Amertan ointment or

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