Building the college of engineering of the University of Oklahoma into one of the foremost in the country has been the accomplishment of James F. Felgar who this year celebrates his twenty-fifth year as dean

The contribution of Sooner engineers

WHEREVER there's engineering work to be done, you'll usually find a Sooner engineer there to do it.

Whether it's Sumatra, Venezuela, Mexico, Argentine, Cuba, Canada, Oklahoma or New York, you'll find Sooner engineers at work, contributing to the advancement of our times with their ability and their training gained at the college of engineering.

Some of them have made places for themselves at the front of engineering and scientific advances. Some of them branched from the fundamentals learned at Oklahoma into another field of engineering, all the better for the basic work done at Norman.

Clarence Karcher, '16as, for instance, was one of the first scientists to learn of the possibilities of geo-physics in oil exploration. Those straight "A's" won in electrical engineering on the O. U. campus, supplemented by physics, carried him to rapid success in his chosen field. After completing his work at Norman, Mr Karcher earned his doctorate in physics at the University of Pennsylvania. Success came to him, each new position an advancement. During the war he was with the Bureau of Standards at Washington. This was followed by research in the processing department of the Western Electric Company in Chicago.

Like many engineers, for Mr Karcher qualifies best, perhaps, as an engineering physicist, he discovered that the basic training of O. U. could be applied to another field, this time one hitherto preempted by the geologist. With the late Dr. W. P. Haseman, formerly head of the physic department of the university, he made the first exploratory work with geo-physics in America. This was in 1920. Since that time, Mr Karcher has been one of the world's leaders in geophysical work.

L. J. Hibbard, '14E.E., for years a special engineer for electric railways with the Western Electrical and Manufacturing Company at Pittsburgh, was long interested in the matter of the drive on electric trains. His plan was tested, adopted and first used on the electric motors installed on Henry Ford's electric railway line serving Detroit.

Verne E. Alden, another electrical engineering graduate of the class of '11, more than saved the Westinghouse Electrical and Manufacturing Company the cost of training several university engineering colleges in the economies he effected in his re-design for electric transformers for that company, resulting in consequent lower manufacturing costs. An engineer is never "fixed" in vocation, nor was Mr Alden, who turned from the electrical field to that of the mechanical, to the design of steam generating plants for the Vacuum Oil Company, the Virginia Electric and Power Company and others. Mr Alden is one of the nationally recognized power engineers, having had responsible positions in the A. I. E. E. and the A. S. M. E.

Although it was in mechanical engineering that Earl Bartholomew obtained his degree from the university in '22, it is in a phase of chemical engineering that he has made a national name for himself, not only as one of the youngest research laboratory chiefs in the country, but in the making of a commodity all Americans use, Ethyl gasoline. After completing his work here and serving for a year as an instructor in mechanical engineering, Mr Bartholomew became an instructor in Harvard university, wrote several text books in engineering, then went to the Ethyl Gasoline Corporation as director of the engineering laboratory. There he has been concerned with research concerning greater accelerating and hill-climbing ability from a given size engine. Mr Bartholomew's scholarship was recognized by election to Phi Beta Kappa.

Jack Bolles, '26civil eng., finds opportunity to satisfy the travel urge more than the average engineer. He has accompanied various expeditions as civil engineer, first the Hittite expedition of the Oriental Institute of the University of Chicago, during which he attended the presidential ball given in honor of Mustapha Kemal Pasha, and later the Carnegie Institute expedition in Yucatan.

The four graduates of the class of '14 in electrical engineering have all carved enviable positions for themselves. Rodney D. Evans, for instance, is the general engineer for the Westinghouse Electrical and Mechanical Company at Swissvale, Pennsylvania. His creative mind has resulted in sixty patents either granted or pending, and his work in connection with power transmission for central stations and a-c. railway systems has brought him national recognition as a leader in solving the power system stability problem. C. E. Carey is the electrical engineer for the Westinghouse company for the Pacific northwest, with headquarters at Seattle, and D. E. Renshaw is the electrical engineer for the mining section of Westinghouse at Wilkinsburg, Pennsylvania. Mr Hibbard's work has already been mentioned. Another electrical engineer who has achieved notable success in pure research is E H. Reid, '23E.E., who is development engineer in the mercury arc department of the General Electric Company, Schenectady, New York. His

work has consisted in developing large rectifyers of high voltage. He contributes frequently to the magazines of the profession.

The civil engineering school has contributed many engineers to the Oklahoma state highway department. Charles G. Keiger, '08as, whose work was done principally in engineering but at a time when it was felt not sufficient work was offered to grant an engineering degree, is chief of division maintenance for the department, while Clarence McFerron, '11C.E., is chief of the division of construction. Other C.E. graduates in the state highway department include: Lawrence C. Bernard, '17, assistant state highway engineer; Paul L. Laws, '22, resident engineer at Oklahoma City; Admiral M. Pownell, '22, field engineer, Oklahoma City; Samuel P. Barnes, '23, resident engineer, Hugo; Robert F. O'Carroll, chief of party, Hugo; Wayne E. Miller, resident engineer, Oklahoma City; James D. Powell, '23, division engineer, Tulsa; Horace Brown, '24, division engineer, Harrah; Jesse L. Hefley, '25, engineering department; Llewellyn G. Leavitt, '26, field man; Marion Hefley, '27, assistant bridge engineer; Homer D. Harrison, '28, investigating engineer for oil products; Louie E. Acker, '29, bridge department; Sam E. Griffin, '29, engineering department; Chester Parker Burns, '30, field engineer; Billy Fairfield, '30, testing department; Maynard G. Fuller, '30, resident engineer; Joe Keeley, '30 and Lawrence T. Matson, '30, resident engineers, Miami; Ray B. Parker, '30, inspector, Oklahoma City; Veater E. Willoughby, '30, field engineer; Gertrude Collier, '31, draftsman; Le Roy Crabbe, '31, testing department; Bond T. Gerbracht, '31, field engineer, Roosevelt; Charles W. Roberts, '31, field engineer, Waurika; Ray G. Andrews, '32, field man; Johnson Forbis, '32, inspector of bridge work; Wyatt B. Hendrick, '32, field work; and Ray W. Lynch, '32, inspector, Waurika.

Sooner civil engineers occupy high positions in the highway departments of other states, as well. George Logan Dolph, '18, is highway engineer for the North Dakota bureau of public roads; Carl Alexander, '21, is highway engineer of the state of Kansas; William C. Johnston, '21, is highway engineer of the state of Arkansas; Charles E. Waite, '22, is highway engineer with the California highway commission; William E. Dilworth, '24, is with the Kansas state highway department; Lewis W. Hall, '24, is office engineer of the Arkansas state highway department; Harold W. Rice, '25, is engineer on oil process for the New Mexico highway department; Herbert L. Oakes, '26, formerly with the engineering faculty of Kansas State Agricultural college, is now general inspector for the Kansas state highway department; Kenneth Donaldson, '28, is testing engineer for the Missouri state highway department; Asa N. Porter, '28, is field engineer for the Illinois state highway department.

A number of other Sooner civil engineers have entered either government or municipal service. Captain Henry G. Schenk, '12, is with the United States Engineering corps in the Panama Canal zone; Kenneth W. Markwell, '20, is consulting engineer for the Memphis harbor commission, in charge of the harbor development there; Sabert A. Hott, '14, is Grant county engineer; John Clyde Milliken, '20, is efficiency engineer for the Oklahoma board of affairs; C. H. Salwaechter, '20, is Woods county engineer; Roland Horton, '21, is municipal and sanitary engineer of St. Louis, Missouri; Gerald T. Gouin, '22, is Osage county consulting engineer; Schooler S. Cobb, '23, is office engineer of Oklahoma City; Hubert A. Paton, '23, is with the United States coast and geodetic survey at Washington, D. C.; Edward W. Mars, '24, is county engineer at Matadon, Texas; Newman B. Smith, '24, is an engineer with the City of Los Angeles, California; Ralph N. Greer, '25, is Seminole city engineer; Oakley F. Wadsack, '25, is civil engineer with the city engineering department of Van Nuys, California; Lieut. John H. Coffman, '26, is with the United States marine corps at Washington, D. C.; Marcys H. Hargis, '26, is pavement engineer for Oklahoma City; John A. Shumate, '26, is a field engineer for the United States geological survey at Washington; Clarence Stoldt, '26, is Blackwell city engineer; Harlan E. Chase, '27, is engineer of sewer design for Oklahoma City; J. George Pointer, '28, is assistant engineer of the Oklahoma corporation commission.

A number of chemical engineering graduates rank at the forefront of leading national industries. Some of these are: Albert E. Gartside, '13, chief chemist of the Eagle Picher Lead company at St. Louis, Missouri; John O. Donaldson, '19, chief chemist for the Colorado Iron & Fuel company at Pueblo, Colorado; Robert S. Gordon, '20, is scientific adviser of the legal firm of Sullivan & Cromwell, New York City; Robert W. Henry, '21, assistant superintendent of the Cosden Oil company, Big Springs, Texas; Guy S. Mitchell, '21, assistant chief chemist of the Barnsdall Refining company, Barnsdall; Ludwig Schmidt, '21, assistant director of research for the bureau of mines laboratory at Bartlesville; Loy G. Horn, '23, chemical engineer for the Standard Oil company at Whittier, California; Dana G. Hefley, '26, chemical engineer for the I. T. I. O. company at Oklahoma City.

It was geology and geological engineering which perhaps first attracted national attention to the university, and it is interesting to note the remarkable list of executives in the oil world who are graduates in geology and geological engineering. A number of these are: Lee Everett DeGolyer, '11, president of the Amerada Petroleum Corporation, Montclair, New Jersey; Ben C. Belt, '10, district chief geologist for the Gulf Production Company, Houston, Texas; Ebert Boylan, '17, general manager of the Caracas Petroleum Corporation at Caracas, Venezuela; Glenn Clark, '13, chief geologist of the Continental Oil Company at Ponca City; Roland L. Clifton, '25M.A., chief geologist of the Champlin Refining Company at Enid; Rodger Denison, '21, '25M. S., district chief geologist of the Amerada Petroleum Corporation at Fort Worth, Texas; Herbert Fuqua, '19, district chief geologist of the Gulf Production Company at Fort Worth, Texas; Charles Walter Hamilton, '12, assistant to the vice president of the South American Gulf Oil Company, New York City; Dow Ham, '22, district geologist for the Shell Petroleum Corporation, Dallas, Texas; Chester A. Reeds, '05, associate curator of the American Museum of Natural History at New York City; Luther White, '14, chief geologist of the J. A. Hull Oil Company, Tulsa; Andrew C. Wright, '21, district geologist of the Shell Petroleum Corporation at Corsicana, Texas; Dollie Radler, '20, '21M.S., administrative geologist of the Amerada Petroleum Corporation at Tulsa.

Petroleum engineers are scattered over the globe, holding important executive positions. Many foreign students, sent here by their governments in many cases, have returned to further the advance of the oil industry in their native lands after training at Norman. A number of these graduates and Sooners serving in foreign countries follow: Cecil D. Alworth, '28, petroleum engineer for the Standard Oil Company of Argentine; Lewis A. Cocke, '28, petroleum engineer for the Standard of Indiana at Port of Spain, Trinidad; Ransome G. Holland, '29, petroleum engineer for the Creole Petroleum Corporation at Maaturin, Venezuela; Jose Amadar Ibarra, '29, petroleum engineer for the Huasteca Petroleum Corporation at Tampico, Mexico; Harold C. Scoville, '29, petroleum engineer for the Lago Petroleum Corporation at La Salina, Maraicabo, Venezuela; Arthur Maddox, '30, petroleum engineer for the International Petroleum Company at Megritos, Talara, Peru; J. W. Miller, '31, with the Standard Oil of Argentina; Juan de laPena. '31, with the Huasteca Petroleum Corporation at Tampico, Mexico; L. N. Coronado, '32, petroleum engineer with the Mexican government, Mexico City; Vicente Fuentes, '32, with the Mercedes Oil Company at Renosa, Tamanlipas, Mexico.

Among the electrical engineers hold-

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OKLAHOMA CITY
O. U. BOOSTERS

PATRICIO GIMENO

(CONTINUED FROM PAGE 199)

before the first settlers of Massachusetts arrived in this country.

"This book of Marco Polo's travels also carries the license of the Spanish Inquisition and has some amazing facts between its covers. Centuries before the world knew anything of petroleum and coal, the writer carried a description in this book about a peculiar sort of oil found in the creeks of Southern Russia that the barbaric natives used as fuel and light. Centuries have passed and now the Standard Oil Company has developed oil fields in this vicinity," Professor Gimeno points out.

But his activities are not limited to reading and collection of books, for with all his other achievements, he is a journalist too, and this interest has led him to edit and illustrate a number of books.

Professor Gimeno is somewhat of a philosopher and an economist. In this connection his estimate of the value of learning Spanish and the relation to trade brings out some most interesting side-lights. He says:

"I have always felt that my mission was to instill an interest in Spanish and Spanish literature in the students with whom I come in contact. Being able to express one's self in another tongue helps one express himself in his own tongue. Many of our great Americans have been scholars of Spanish and its literature, Washington Irving, Longfellow and James Russell Lowell. In my library I have many of the volumes of Spanish literature from Lowell's history.

"By knowing the language and the literature of a people, you learn the nature of that people. There never was a better time to learn about Latin America. We are in the trough of a depression, our factories are closed and the wheels of industry are thirsting for more markets. There are seventy millions of people south of us, Spanish speaking people, who are still 'buying European.' We have only scratched the surface of trade. Millions of them are wearing clothes which were woven in England out of Australian wool and Indian cotton!

"Englishmen are very good at learning the ways of others and their likes. And a noteworthy fact is that one of the best texts I have been able to find in teaching Spanish commercial practice in connection with export and import trade is written by an Englishman and published in London. In the preface the author gives the following wise advice about certain peculiar customs of South America: Such letters are expected by our foreign customers, and if we wish to trade with Rome we must write as the Romans write, and not as we think they ought to write.

"I foresee for the very near future vast outlets and markets for our machinery. The wealth is there and the wealth is here but it needs circulation. And it will take trade with these millions to the south of us to start that circulation and get us out of this temporary period of stagnation."

With many years of teaching service to his credit and the exertion of a wholesome influence on the lives of many Oklahomans who have carved their niches in the world of business, Professor Gimeno has performed a worthy task and there are many years of a peaceful, contented and happy life in store for this man, who has made a place for himself in the hearts of all those who have had the privilege of coming in contact with him. A toast to the Spanish gentleman.

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THE CONTRIBUTION OF SOONER ENGINEERS

(CONTINUED FROM PAGE 189)

ing important executive positions are: L. B. Curtis, '10, secretary-treasurer of the Mining Research Bureau at Boulder, Colorado; Leo H. Gorton, '13, president of Dresser & Gorton, Inc., at Tulsa; C. T. Hughes, '18, superintendent of power of the Electric Railways of Connecticut, Milldale, Connecticut; R. F. Danner, '20, general superintendent of the Oklahoma Gas & Electric Company, in which firm fifty-seven Sooner engineers are employed; Enoch B. Ferrell, '21, radio engineer with the Bell Telephone laboratories in New York, where Mr Ferrell is at the forefront in short wave transmission experimentation; W. H. Reilly, '23, assistant to the general manager of the Southwestern Bell Telephone Company; P. H. Robinson, '25, transmission engineer for the Houston Light & Power Company at Houston, Texas; Watson Jones, '28, engineer with the RCA Photophone Company at Oakland, California.

Notable among the successful graduates of the school of mechanical engineering are the following: Joseph C. Gordon, '15, mechanical engineer for the Pure Oil Company, Fort Worth, Texas; Harry S. Odermann, '16, president of the Detroit City Service Company, Detroit, Michigan; Eugene Pembleton, '17, superintendent of the refinery of the Henry L. Doherty Company, Boston, Massachusetts; Edward H. Reeves, '18, professor at the Massachusetts Institute of Technology, Boston, Massachusetts; Benjamin Stockwell, '18, manager of the Southwestern Pipe Line, Bristow, Oklahoma; Floyd Waterfield, '20, superintendent of the Oklahoma Pipe Line Company, Muskogee and president of the Oklahoma section of the A. A. E.; John H. Baxter, '21, sales manager for the Inland Gas Company, Ashland, Kentucky; David E. Fields, '25, mechanical engineer for the Tulsa Boiler and Iron Works, Tulsa; Guy S. Mitchel, '25, gas engineer for the Pittsburgh Light and Power Company, Pittsburgh, Pennsyl-

vania; George W. Russler, '26, research petroleum engineer for the Mellon Institute, Pittsburgh, Pennsylvania; H. B. Prewitt, jr., '27, sales engineer for the American Blower Corporation, Flint, Michigan; L. L. Gray, '28, district engineer, Gypsy Oil Company, Hobbs, New Mexico; R. L. Mallory, '28, sales engineer for the Foxboro Company, Tulsa; W. K. Ritter, '29, research engineer for the United States government, Langley Field, Virginia; and C. W. Armstrong, '32, engineering accountant for General Mills, Inc., Minneapolis, Minnesota.

In many universities, in practically every industry employing engineers, Sooner engineers are found, contributing to the building of the nation with their technical foundation laid in Norman.

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TUBERCULOSIS AND GENIUS

(CONTINUED FROM PAGE 203)

for him to recognize his physical deficiencies, he now flung himself into the pursuit of divine love, accepting poverty, fasting and suffering as stepping-stones to higher plains of living, ever marching forward with songs of praise in his heart until in his death agony he wished to lie bare on the bare ground to show that he had nothing and was nothing. Without attempting to catalogue his thoughts and deeds, it is easy to see that the life of St. Francis was consistently inconsistent, conventionally unconventional. Evidently his secondary personality was in the foreground and his genius was at large.

St. Francis was only forty-six when he died, but he was prematurely old. Between disease, fasting and fighting, his energy was spent, but his spirit still gave off sparks when exposed to the hammer. Though his life was now saddened by physical debility and his failure to "end the crusades by the conversion of Islam," imagine his disappointment when he was told that he was going blind and only the cautery could give him some promise of relief. Think what this must have meant to this brother of all living creatures and all things beautiful in the world! But his seeming inconsistency was constant. When the moment for cauterization arrived and the iron was taken from the furnace, he said: "Brother Fire, God made you beautiful and strong and useful; I pray you be courteous with me."

After a period of fasting on Mount Alverno it is said that he was no longer able to walk and it was apparent that his strength was spent and that life could not last much longer. Evidently tuberculosis had done its work and no doubt at that very moment "his eyes glowed with the fire that fretted him night and day." Like many other fellow-sufferers, as death approached, he was carried from place to place; even Cortona, by the Lake of Perugia, did not satisfy him, and finally he was stung by the pathetic sense of his homelessness, even though homelessness had been a part of his gospel, and he turned his face toward Assisi; and, if he did not see, with his seared eyes, the Portiuncula, his soul rejoiced when its pillars first appeared to those who were with him and he must have experienced all the glory of homecoming when they placed his dying body in the little room just outside the Portiuncula. With the strange psychic energy which often accompanies the tuberculous into the depths of the valley of death, he emphasized this final sense of place and possession by saying to those about him, "Never give up this place. If you would go anywhere or make any pilgrimage, return always to your home; for this is the holy house of God." After having the brethren sing canticles and psalms in which he joined, he requested that his body be laid on the bare ground in order that his soul might mount unhampered to its source. With the silencing of song and the lowering of the frail body from its couch, there must have been a penetrating stillness punctuated by every footstep on the porches of the Portiuncula, as the brown figures suddenly saddened, moved cautiously and aimlessly about.

It was the third of October, 1226, when tuberculosis won the final victory and forced the separation of spirit and body. Just what the toxines of tuberculosis had to do with the creative energy of this impetuous mind and to what extent it was influenced by the restraining effects of disease upon his physical activities, we can never know, but it is certain that tuberculosis played a part in this unprecedented expression of genius.

St. Francis was chief pathologist at the death of the Dark Ages. With the accuracy which could come only through a fine dissection, he discovered the maladies which had dragged humanity down, and set about to free society from their ravages—as a consequence, he has been called "the morning star of the Rennaissance." In the words of Gilbert K. Chesterton:

> From him came a whole awakening of the world and a dawn in which all shapes and colors could be seen anew. The mighty men of genius who made the Christian civilization that we know, appear in history almost as his servants and imitators. Before Dante was, he had given poetry to Italy; before St. Louis ruled, he had risen as a tribune of the poor; and before Giotto had painted the pictures, he had enacted the scenes . . . . He was the spiritual essence and substance that walked the world before anyone had seen these things in visible forms derived from it: a wandering fire as if from nowhere, at which men, more material, could light both torches and tapers. He was the soul of medieval civilization before it even found a body.

His charity was as spontaneous, as far reaching, as godlike as the blue heaven vaulting the plains of Umbria—as refreshing as a perpetual fountain in an ancient market place. A spiritual genius walking in the shadow of the Dark Ages, yet delicately attuned to all the needs of modern mankind. We bow our heads in humble recognition of his influence in the world today.