



Missouri S&T Magazine, December 1945-January 1946

Miner Alumni Association

Follow this and additional works at: <https://scholarsmine.mst.edu/alumni-magazine>

Recommended Citation

Miner Alumni Association, "Missouri S&T Magazine, December 1945-January 1946" (1946). *Missouri S&T Magazine*. 221.

<https://scholarsmine.mst.edu/alumni-magazine/221>

This Magazine is brought to you for free and open access by Scholars' Mine. It has been accepted for inclusion in Missouri S&T Magazine by an authorized administrator of Scholars' Mine. This work is protected by U. S. Copyright Law. Unauthorized use including reproduction for redistribution requires the permission of the copyright holder. For more information, please contact scholarsmine@mst.edu.

Dec 1945 - Jan 1946

MSM ALUMNUS

Missouri School of Mines and Metallurgy
ROLLA, MO.

VOLUME 20

DECEMBER, 1945 - JANUARY, 1946

NUMBER 1

New Benches Erected on Campus Provided by Independents of '42



Courtesy St. Louis Post-Dispatch

LT. JOSEPH P. BERNDT and DEAN CURTIS L. WILSON

In December of 1942, the Independent Students Organization provided the sum of \$150.00 to be used by the School in erecting concrete benches on the campus as a memorial to the class. The matter was brought before Dean Wilson by Joseph P. Berndt '43, president of the Independents, and John H. Olson '43, chairman of the Bench Memorial Committee, acting for the Independents of 1942.

Construction of the new benches was postponed on account of labor shortage until the past summer. Fifteen of these benches were erected at various points on the campus.

They are of attractive design and are made of concrete with the exception of the seats which are made of heavy wooden slat construction and carefully painted. The benches offer an attractive memorial to the Independents of the class.

In front of each bench is a cast concrete tablet reading as follows:

PRESENTED
BY
INDEPENDENTS
OF 1942

Radar

The Most Versatile Weapon of the War

By DR. MERVIN J. KELLY '14

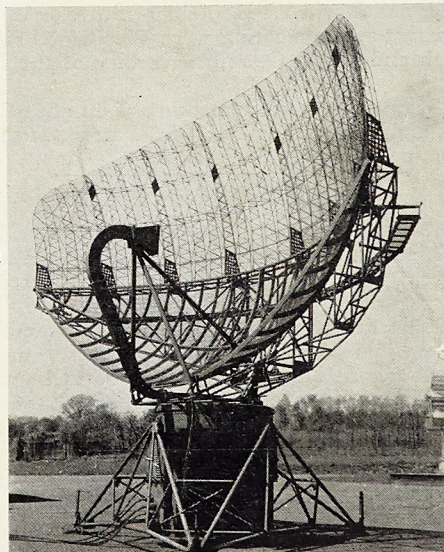
Executive Vice President and Director of Research
Bell Telephone Laboratories

X

Methods and strategy of warfare have undergone profound change during the six years of World War II. This is primarily due to the advent and constant evolution throughout the period of a great variety of new weapons and instrumentalities for war. Science and technology inspired and created them, while the military developed continually improving techniques for their use.

The resourcefulness and determination of our fighting men, the superior strategy and well organized logistics of our Army and Navy commands were essential to the complete victory that we have attained. However, were it not for the overwhelming superiority in effectiveness and quality of our new weapons and the tremendous volume in which they were produced, victory would have been long delayed and our loss of men many fold greater.

Radar—**RA**dio **D**etection **A**nd **R**anging—in the importance of its contribution to victory ranks high, probably first among the new weapons of this war. It employs radio waves for the detection and accurate location of objects, fixed or moving. It can see farther than the eye, even under condi-



The antenna of a land based airplane search radar.

(This radar employs microwaves, was developed during the war and represents a great advance over earlier types.)

tions most favorable to vision. It sees equally well by night and by day. Neither smoke, fog, clouds nor rain need diminish its range or its resolution of objects.

In consequence of its ability to see, radar has played a great and increasingly important role in the conduct of the war on the land, the sea and in the air. It has brought about

(Continued on Page 10)

Contracts for New Power Plant Let



(Construction work on new power plant on January 4, 1946)

McCarthy Construction Company, of which firm L. M. McCarthy '20 is a member, was successful bidder for the construction of the main portion of the new Power Plant being erected on the campus.

Contracts for the construction were awarded at a meeting of the full Board of Curators of the University of Missouri, held in Rolla, Oct. 12, 1945. Bids were accepted from the McCarthy Brothers Construction Company of St. Louis for the construction of the boiler foundations and building at a price of \$131,660.00. The contract for piping was awarded to the Industrial Heating and Plumbing Company of St. Joseph for \$89,822.00. The H. Chapline Electrical Company of St. Louis was given the contract for wiring at a price of \$13,775.00. Bids for the stack were all rejected because it appeared that they were too high. The contract for this part of the plant will be let at a later date.

Curators attending the meeting included Senator Allen McReynolds of Carthage, President of the Board; James A. Potter of Jefferson City; John H. Wolpers of Poplar Bluff; Roscoe Anderson of Webster Groves; Frank C. Mann of Springfield; and David W. Hopkins of St. Joseph.

Also present at the meeting were President Frederick A. Middlebush and Leslie Cowan, Secretary of the Board, of Columbia.

McCarthy, in school, was a member of Lambda Chi Alpha fraternity, and played the part of St. Patrick at the annual celebration in 1918.

1st Lt. Kenneth Sylvester Blauvelt ex-'43 Missing in Action

1st Lt. Kenneth Sylvester Blauvelt failed to return from a bombing mission to Leyte and has not been heard of since that time, according to word received from E. E. Bauer of Triangle fraternity of which Kenneth was a member. Kenneth enrolled in 1939 and continued for one semester with a good grade record. He participated in football, was a member of the Miner Board and the Rollamo Board. He was initiated into the local chapter of Triangle while on the campus.

Russell B. Caples '10 New Life Member

Russell B. Caples has just sent payment of dues for life. Cape writes that he is tired of getting annual bills and decided to settle the problem once and for all by becoming a life member. Graduating in 1910, Cape was a member of Tau Beta Pi and of the Athletic Association while on the campus. He has long been associated with the Anaconda Copper Company and is at present General Superintendent of this company at Great Falls, Mont. Cape makes the fifth alumnus to become a life member since the new regulations regarding life membership have been adopted.

Eastern Star Enlarges Loan Fund for Veterans

A second check for emergency loans to veterans has been received by Dean Curtis L. Wilson from the Order of the Eastern Star of Missouri, the check being received from Mrs. Pearl E. Peabody, Grand Secretary, on December 11, and amounting to \$813.30. The Dean had previously received a check for \$1500 for this purpose from Mrs. Agnes Wolfarth, Worthy Grand Matron, of the Organization. Mrs. Wolfarth is the mother of Teddy Wolfarth who attended MSM for two semesters in 1942-43 and then withdrew to enter military service.



MRS. AGNES WOLFARTH

The fund is for short term loans to World War II veterans to tide them over emergencies. Already the fund previously established at MSM has been used rather extensively and greater demands are expected with the enrollment growing with each registration, the increase coming almost entirely from veterans.

Col. Enoch R. Needles '14 Receives Legion of Merit

Col. Enoch R. Needles who has been serving as Chief of the Redistribution and Salvage Division, Office of the Chief of Engineers, has been awarded the Legion of Merit in recognition of his services in connection with procurement, construction and distribution and salvage. The citation for Col. Needles stated that he prepared for the joint Chiefs of Staff special studies relating to artificial harbors and floating facilities for aircraft.

Enoch is a member of the firm of Howard, Needles, Tammen & Bergendoff, consulting engineers, with offices at 55 Liberty street, New York, N.Y., and 1012 Baltimore avenue, Kansas City, Mo. He was given the honorary degree of Doctor of Engineering at the commencement in 1937.

Looking Ahead

Dr. Mervin J. Kelly's excellent article on Page 1 of the Alumnus, this issue, begins what the editor hopes will be a series of such articles dealing with the scientific accomplishments and activities of the alumni. Dr. Kelly is Executive Vice President and Director of Research of the Bell Telephone Laboratories, famous throughout the world in the field of research. Dr. Kelly received his Bachelor of Science degree at MSM in 1914 and was given the honorary degree of Doctor of Engineering by the school in 1936. He has a master's degree from the University of Kentucky and the Doctor of Philosophy degree from the University of Chicago. He is a Fellow American Physical Society, Acoustical Society of America, American Institute of Electrical Engineers, Institute of Radio Engineers, and Member National Academy of Sciences.

During the war, in addition to directing the radar, radio communication, electrical director and other allied research activities of the Bell Telephone Laboratories, Dr. Kelly was a member of the Radar Research Board of the National Defense Research Committee and advisor to various technical bureaus of the Army and Navy on their research and development activities.

The editors hope to have similar articles in future issues.

MSM Alumnus

Issued bi-monthly in the interest of the graduates and former students of the School of Mines and Metallurgy. Subscription price 50 cents, included in Alumni Dues. Entered as second-class matter Oct. 7, 1926, at Post Office at Rolla, Mo., under the Act of March 3, 1879.

Officers of the Association

FRED C. SCHNEEBERGER '25 *President*
 KARL F. HASSELMANN '25 *Vice-President*
 HOWARD M. KATZ '13 *Secretary-Treasurer*

DIRECTORY BY CLASSES is being held over till another issue to complete news items held over from last issue and to publish all news in order to bring you the latest information available.—The Editor.

President's Column

In the spirit of a new year which is being born, and in the interest of unity of purpose, I should like to urge all of our members to exercise—as a trial during the year 1946—a little of the old-fashioned tolerance, without which nothing real has ever been accomplished—anywhere.

Your officers during the past year have struggled with many and varied emotional problems. Among these problems, there are some which are fanciful—and some, real.

We have enjoyed the encouragement which has come to us from all points of the compass. We have, likewise, had evidence of manifestations of disgruntlement from some sources. This latter is unfortunate — and the reason it is present among some of our organization—can be charged directly to the absence of complete facts in the minds of some of our members. In 1946 you're going to have, again, all the facts we can procure for you.

The proper way to build up a conclusion, is to take all of the known facts, estimate the unknown facts, deduct both down to net, equate them — and then make up your mind about that conclusion.

Karl Hasselmann, Howard Katz, and I, have been representing you on all fronts during the past year. We've made mistakes—but we've tried vigorously to "fight the case of MSM," and we know more about the score now than we did a year ago. In this effort we have had the able assistance and counsel of a number of our prominent Alumni. (Without mentioning all their names—one man stands out—and that's Babe Head!) We have, likewise, been the beneficiaries of the results of a number of our younger, hard working, enthusiastic Alumni, who have rejuvenated our Section Organizations.

I can't speak authoritatively about Howard Katz — but, we're just a couple of "Farmer Boys," Karl and I. But, come to think of it, so are a number of our most powerful and influential Alumni. Of course, I can't speak too authoritatively about Karl either—but he was reared up there in Iowa, and that pair of hands he has (like a couple bunches of bananas) were not developed to their present proportions in his present pent-house office on top the highest building in Houston!

Personally, I have spent most of my younger years on a farm. I've gotten up early in the morning, when it was so dark you couldn't tell which hand carried the lantern, excepting by the weight. Then I proceeded to milk cows—and many a time I waded through an entire milking only to discover when I picked up my fluid returns, that I'd been milking into a chipbasket—instead of a pail—again, because of the darkness.

But, after the darkness—there comes light!

Karl and I had a meeting with the Board of Curators;

President Middlebush, and Vice President Cowan, of the University of Missouri; and Dean Wilson, here in St. Louis on December 14.

This meeting was the most gratifying one in which it has been my pleasure to sit, since I've had anything to do with MSM Alumni affairs. Karl joins me, I know, in the feeling that among those present at this meeting there was nothing but a most cordial and completely interested desire to do whatever is necessary to make our School live up to its fine reputation—and to do it with funds and friendliness.

We were requested by each one of those present to tell him how he could do, in his capacity, a better job for MSM.

In response to these requests, we submitted a number of questions regarding the position of MSM in the University set-up. Every one of our questions was openly and sincerely approached.

Among the subjects settled during this meeting were the following:

1. President Middlebush is to write an article for the ALUMNUS in which MSM's position in the State of Missouri Educational System is clearly defined—including the legal background which determines such position.

2. Besides this article, President Middlebush has volunteered to furnish us, from time to time for publication, the reasons for certain actions concerning the operation of the physical plant at Rolla, and the reasons, when not obvious, concerning the functions of the faculty, etc.

3. President Middlebush and the Board of Curators were wholeheartedly anxious to have President Middlebush attend meetings of our Alumni Sections throughout the country in the company of Dean Wilson. (More on this later, but Sections at Los Angeles, Cleveland, San Francisco, Chicago, New York, Tulsa, Houston, St. Louis, and Kansas City, etc., should take note, and begin to think about dates in 1946 which might fit into Dr. Middlebush's plans.)

4. President Middlebush is to visit Rolla for important functions and ceremonies even more often in the future than he has in the past (and it should be noted, that President Middlebush has made more visits in the past than **any previous President** of the University of Missouri).

We now have a Board of Curators backing President Middlebush, and Dean Wilson in a manner, we believe, far more determined than ever before in the direction of pushing MSM into its proper place in the sun—and keeping it there.

Many of the troublesome incidents of the past few years were brought out in the open and thoroughly discussed.

MSM has not run too smoothly in these past few years. Let's not forget, however, that times have been turbulent, and so what business has run smoothly? Start any place you like—let's take the UNO—running smoothly? Or, take the business of any one of us in the Alumni organization — running smoothly? Personnel problems, strikes, materials manipulation, etc., have made a **job** of the management of any kind of a business—and—education is a business.

Finally, Dr. Middlebush reminded us that our relationship with the University of Missouri is a "two-way street." And, that cooperation must be wholeheartedly in **both** directions. The University of Missouri has problems. The Missouri School of Mines has problems. The MSM Alumni Association has problems. I'm sure, however, that if all of our Alumni could have attended our meeting on December 14, a most enthusiastic forward approach to all of our problems would have resulted.

So, during this year 1946, let's all resolve to do our level-best to think in terms of the future, and let's all try our hands at coordinated cooperation. Let's see whether you can't help demonstrate that the couple of farmer boys you have representing you—after all, are fair judges of human nature—that they are dealing in apparent realities—not fantasies—and that they learn as they go—and Go as they learnabout men and things in general.

John W. Scott ex-'89 Awarded Citation of Merit

At the MSM ROTC Band Concert held in Parker Hall the evening of Dec. 14, the long and faithful services of John W. Scott as director of the band were given recognition. On behalf of the Board of Curators of the University of Missouri, Dean Curtis L. Wilson read the following communication:

"My dear Mr. Scott:

"For many years we have been cognizant of the splendid service that you have been rendering as Director of the Missouri School of Mines ROTC Band. There can scarcely be a band director who has served one organization a longer time, and there cannot be any who have shown greater devotion.

"We are sure that the Board of Curators and the entire University administration would want you to know that your work with our students is deeply appreciated. We take this occasion to congratulate you on the wonderful results of your inspirational leadership, to acknowledge our deep gratitude and to extend assurance of our esteem and best wishes."

Allen McReynolds,
President, Board of Curators.
Frank C. Mann,
Chairman, Executive Committee.
Frederick A. Middlebush,
President, University of Missouri.

On behalf of the MSM Alumni Association, Dean Wilson presented Mr. Scott with a Citation of Merit engraved on parchment and nicely framed. The Citation read as follows:

The Alumni Association
of
Missouri School of Mines and Metallurgy
To Whom It May Concern, Greetings:

JOHN WALTER SCOTT

In recognition of outstanding service to Missouri School of Mines and Metallurgy—service which represents loyal devotion to the progress of an educational ideal and which has been rendered freely and unselfishly—is hereby awarded this

CITATION OF MERIT

This certificate carries with it the gratitude of all men and women who take pride in the Missouri School of Mines and Metallurgy of the past and present and who hold faith in its future.

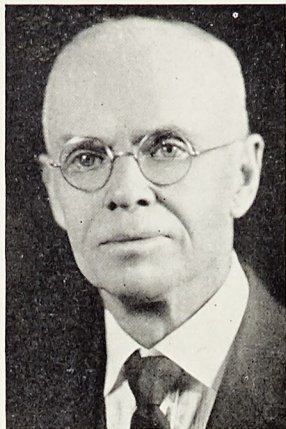
Conferred by order of the Board of Directors this first day of December in the year 1945 A.D.

F. C. Schneeberger,
President, MSM Alumni Association.
Howard M. Katz,
Secretary, MSM Alumni Association.

Mr. Scott, in a letter to Dean Wilson expressed appreciation to both School and Alumni officials, as quoted below: "My dear Doctor Wilson:

"I find it not an easy matter for me to express in writing, or even in words, the thrill of pleasure that was mine when, at our Band Concert last Thursday night, you presented me with that very fine letter of recognition and appreciation of my work, in a musical way, with students of MSM during years past. Please accept my hearty and sincere thanks for this token. The incident was indeed a complete surprise to me and one of the happiest I ever experienced.

"I am very proud of this letter, and I know that every



Dr. Charles J. Potter '29 Speaks

Before the Academy of Political Science

Dr. Charles J. Potter spoke before the Academy of Political Science at the Waldorf Astoria in New York City on Nov. 8. He is deputy to the Solid Fuels Administrator for War, and in his address he said that the shattered economic structure of liberated Europe can be started on the road to recovery only through vigorous and immediate acceleration of German coal production. Present production, he said, was "pitifully inadequate."

The Ruhr is producing less than a fourth of its pre-war capacity and German mines are not meeting essential army requirements, he reported. The United States can and will supply about 2,000,000 tons a month, using one-third of the world's shipping to transport it, but even this, together with Polish exports, will leave Europe desperately short, he said.

Future Issues of Alumnus Only to Paid Members

This issue of the Alumnus magazine is the last that will be sent to all the Alumni. Statement of Alumni dues is being sent out to all members and it is hoped that the response this year will exceed the response last year which was the greatest in the history of the Alumni Association. It costs money to publish the type of magazine that is being issued but it is the type of magazine desired by the Alumni as evidenced by a large number of letters received from Alumni all over the world. Alumni officials are hoping to make the membership list reach 2000 in 1946.

member of the 'Scott Tribe' will be, when I show it to them next week. Mrs. Scott and I will be with Walter and his family in Downers Grove next Sunday then on to Washington, D.C. to be with our daughter's family (the Morrises) over Christmas Day.

"I enjoy my work with the MSM band and I try to lead them into the higher musical forms—the things that I consider worth-while in music. The enjoyment and satisfaction I get out of my efforts is ample compensation for my time and energy given. But now, with this fine expression and recognition from you, and the powers that be, I feel doubly paid. Dean Wilson, won't you please extend to Dr. Middlebush, President of the University, and to the members of the Board of Curators, my sincere thanks and appreciation for the recognition they have so kindly shown me.

"I am also equally proud of the 'Citation of Merit' which you presented to me, on the same occasion, on behalf of the MSM Alumni Association. This splendid expression from my fellow students, my friends and associates of over half a century on the campus of our Alma Mater, will always be cherished by me and mine. It is, to me, a sacred token, the value of which can be measured only in terms of friendliness and good fellowship—something beyond a price.

"So again, Doctor Wilson, will you please convey to my good friends Freddie Schneeberger, President of our Alumni Association, to Howard M. Katz, our Secretary and through them to all the members, my truly heartfelt thanks, assuring them that I appreciate this present as one of the finest tributes they could possibly have given me. I feel that I have much in common with MSM. The date on the cornerstone of the first building erected on the campus is 1871. This was the year I came to Rolla. I have lived practically in sight of the campus ever since, entering as a student in 1885. Having now passed my 'Three score years and ten' (and then some) I feel that it is not 'in the picture' for me to serve 'another sixty years,' as you very kindly suggested. I shall, however, do my best to carry on for at least a while longer.

"Accept my kindest personal regards, Dean Wilson, and my wish for your continued success and happiness in the splendid work you are doing for our dear old MSM."

Who's Who on the Campus :: Department of Ceramic Engineering



DR. PAUL G. HEROLD

The Department of Ceramic Engineering occupies the top floor of the Experiment Station Building and half of the space in the laboratory building to the rear. Just recently the Mining Engineering Department has moved to new quarters which has given the Ceramic Engineering Department some much needed space. The laboratories contain all the usual ceramic equipment for processing ceramic materials into whiteware, enamel, and refractory products and the necessary testing equipment. Also provided are equipment and facilities for X-ray diffraction analysis, petrographic analysis, and chemical analysis. The Department also operates a Clay Testing and Research Laboratory in conjunction with the State Mining Experiment Station which gives the students a knowledge of commercial test procedure.

Some recent additions to the laboratory equipment include a nine cubic foot Globar resistance electric furnace, batch ball mills, thermal expansion furnace, gas fired high temperature furnace, hammer mill, Simpson mixer, and super centrifuge for work on raw clays.

Graduate work leading to the degree of Master of Science in Ceramic Engineering is offered by the Department. The Refractories Industry of the State support an Industrial Fellow who is expected to apply part time to problems of interest to the Industry and spend the remainder of the time

working on the Doctor of Philosophy degree. By special arrangements with the University of Missouri, the Ceramic Engineering Department gives complete work leading to the degree of Doctor of Philosophy in Ceramic Engineering, the degree being conferred by the University.

The staff of the Ceramic Engineering Department consists of Paul G. Herold, Professor of Ceramic Engineering and Chairman of the Department, and Lt. C. W. Dougan, Instructor in Ceramic Engineering, on leave of absence to the U.S. Navy since 1943.

Dr. Herold is a graduate of Ohio State University where he also received the degrees of Master of Science and Doctor of Philosophy in Ceramic Engineering. Before coming here in 1936 he did research work for A. C. Spark Plug Company and Edgar Plastic Kaolin Company. He has published several papers in ceramic journals and the school publications. He is a fellow and member of the American Ceramic Society, a member of American Institute of Ceramic Engineers, Missouri Society of Professional Engineers, National Society of Professional Engineers, American Institute of Mining and Metallurgical Engineers, American Society for Testing Materials, Sigma Xi, Tau Beta Pi, Alpha Chi Sigma, Kappa Kappa Psi, Sigma Pi, and Keramos. He is now serving as faculty advisor to the Alpha Iota Chapter of Sigma Pi, as Grand Secretary of Keramos, Secretary of the Ceramic Educational Council of the American Ceramic Society, and President of the Rolla Rotary Club.

C. W. Dougan has had several years' experience in Industry, coming to the School from the Gladding McBean & Company in California. He received the Bachelor of Science in Metallurgy and Ceramics from the University of Alabama and the Master of Science from Montana School of Mines. He is a member of the American Ceramic Society, and the American Institute of Mining and Metallurgical Engineers.

With the Local Sections

Los Angeles Section Honors Ted Lynton

The Los Angeles Section of the Alumni Association had a dinner party on Friday, Dec. 21, honoring Ted Lynton '12 on the occasion of a great distinction which has come to him. Recently the president of the Standard Oil Company received a letter from the head of the Ministry of Economic Development of the French Government suggesting that Standard Oil would confer a great favor on the Government of France by making available the services of Ted Lynton. The letter went on to say that while in North Africa as technical expert for our Board of Economic Warfare, Mr. Lynton's work brought him in close contact with some of the high officials of the French Government who were very much impressed by his ability and personality. Standard Oil, of course, agreed to give Ted the leave of absence so he could accept an assignment for the next eighteen months to two years in full charge of training French engineers in petroleum techniques.

With becoming modesty Ted insists that there are other petroleum men in Southern California more qualified than he, but that he got this flattering offer because of his ability to speak French fluently. Be that as it may, we know that Ted will cover himself with credit in his new assignment and bring added glory to MSM, whose reputation is based on the accomplishments of its graduates. Ted, his wife, and son Dennis left for Paris right after New Year.

At the meeting John P. Rasor advanced the interesting suggestion that certain industrial firms might be willing to give some of their younger technical experts a year's leave of absence to do "work in residence" at a school like MSM. The industry would pay a portion of the valued employee's salary in order to give him the opportunity for additional

New York Section

The regular bi-monthly luncheon of MSM Alumni was held on Nov. 13 in New York City. Those attending were Lawrence May '02, George A. Easley '09, J. S. Stewart '10, J. W. Shotwell '15, J. L. Head '16, J. H. Reid '27, C. H. Lambur '33, A. F. Bochenek '37, H. F. Bottcher '41, J. L. Lessman '41, and H. S. McQueen.

John Shotwell, who sailed the following day to return to Saudi, Arabia where he is assistant general manager of the Saudi Arabian Mining Syndicate, Ltd., a subsidiary of the American Smelting and Refining Company, spoke briefly of conditions in that country and of the complications brought about by the Palestine situation. Maj. Lambur, recently discharged, told of his experiences in North Africa, Pantelleria, Sicily and Italy and of having a ringside seat at the eruption of Vesuvius.

research work or post-graduate study, together with teaching duties, with the school making up the balance needed to equal his full salary. Those present seemed to agree that the infusion of fresh new ideas from the commercial world would serve as a stimulus to the permanent faculty and to the students.

Through the cooperation of Ted Lynton, Standard Oil recently made available to the school some geophysical apparatus which they no longer needed, and which the school could use to good advantage. It was felt that many of the other alumni throughout the country might want to help the school in similar fashion, either by way of a gift of special equipment which their firms no longer use, or if this is not possible, by making it available to the school at a very favorable price.

Barney Nudelman, Chairman.

An Evening in Paris with the MPs

By Maj. T. O. "Sheriff" Seiberling '33

Foreword. . . . Despite my better judgment, if any, I have allowed myself to make a promise to an old friend to give the "low-down" on Paris as I saw it as an MP officer. This same old friend has promised to square any possible or probable difficulty with my wife. . . . in case she should accidentally read this learned article. For those good Miners and others who might have wives, and who might have spent a night or two in Paris, I would suggest that they immediately get in training, both in running and dodging flying crockery. I write what I see and what I think, and to hell with the consequences. I am very fast on my feet, anyhow.

The hush of late evening was settling over the city as I left my troop billits in Jardin D'Acclimation near the northeast corner of Bois de Boulogne and headed for Metro Sablons. It had been a hard day full of all sorts of complications from rape to mail robberies; but that was to be expected in Paris early in May, 1945.

My Battalion was engaged in furnishing the security guard for certain railway stations in and near Paris, and furnishing train guard on the mail and ration trains moving north and east from these stations. We were assigned to the 2nd MRS under the security section; but word had come down that soon we were to assume the duty of Traffic and Town Patrol.

We had been activated early in November 1944 in the 15th Repple Depple as an MP Battalion. Only about twenty of the 550 officers and enlisted men had ever been MPs. The remainder of us were mostly combat troops wearing purple hearts and a notation on our records reading, "Limited Assignment." All we knew about MPs were that they were somebody to stay away from when you wanted to have "fun," and somebody to ask when you got lost or in trouble. We had two weeks training, and then had been rushed to Paris to see if it were not possible to get more than 30% of the rations shipped by rail through to the railheads. It was realized of course that perhaps 20% of the loss was due to the enemy action, accidents, spoilage and plain carelessness in loading; but the higher commanders could not think of any good reason why nearly 50% of rations and gasoline should be sidetracked into the Black Market, most of which was transacted in Paris.

Supplying this organization was quite a task and had to be well organized. The French, of course, were old hands at the game, but they were short of transportation. Hence, they must wait until their "liberators" brought the desired supplies to Paris. What they could not buy they could always steal and so 17 brand new MP battalions were activated out of amateur MP material early in November 1944 to see if "something could be done about it."

My battalion had spent nearly 6 months doing rail guard duty and by various means and methods had cut the sales, thefts and plain robberies of mail and rations down to a more reasonable figure. Soldiers who had gone hungry and without cigarettes in the foxholes from Normandy to Germany were inclined to be forgetful. Sometimes they would forget to holler, "Halt," until after they fired. But after all was said and done, a dead thief like a dead German could do no more than just stink until somebody buried him. And so the time had come when this battalion was to become real MPs complete with white helmet liners and pistols. From tramping guard around a train all night in the snow, they were to start patrolling places like Champs Elysees, Pigalle, and the Opera, correcting all of the soldiers they saw out of line, directing all lost souls, settling disputes, stopping fights, and saluting all officers. This was going to be a bigger job than converting a few dozen ration thieves to dead, but honest, Frenchmen.

It had been decided that both officers and enlisted men would pair up with the town-patrol MPs, and learn all about their new job by actually doing it under expert guidance.

The area known as "Pigalle" offered more experience than any other in all of Paris. I had decided to spend the evening looking the situation over and observing the actions of both my troops and also those of the trained MP Bns. A lot can be learned by just observing from the sidelines. I was dressed in ordinary ODs and field jacket, because I wanted to be as inconspicuous as possible.

I had wandered through the area known as Pigalle dozens of times when off duty, mostly out of curiosity; but tonight it was to be different. Instead of observing drunken officers and enlisted men bargaining with the prostitutes on the streets and in the cafes, or watching some other sort of drunken brawl or exhibition, I was to observe the MPs on the job to see how they clicked. . . . and so I continued on toward Metro Sablons. I had proceeded only about a dozen paces from the billets when I noted one of my enlisted men with a blanket roll under one arm and a French WAC on the other, heading for the woods. He was not stopped by the guard, and he was not in uniform since he had fatigues on. And so I retraced my steps, halted the procession and asked the soldier what mission he was on.

He was perfectly frank and said that he only had a couple of hours before going on train guard and so did not have time to dress as is customary and take his girl-friend for a walk.

The girl was very good looking, as is customary with French girls; but I was hard-hearted and ordered him to put on his Class "A" uniform if he wanted to go out socially. He rushed back in to don his Class "A," while I "chewed out" the guard for permitting a soldier to leave the post not properly dressed. Nothing was said about the blanket roll; but it did look like a practical idea. The French girl stood by and waited with the patience of her kind and held the blanket roll.

And so I proceeded on to the Metro and boarded a train without even having to push or shove. I changed at Metro Etoile and went in direction Nation. I only had to shove a little to get into the car door. The dozen or so coming after me did all of the pushing, which is customary. As long as a Frenchman can get a foot in the door, he is almost as good as on. When there is no room to get near enough to the train to put a foot in the door it is considered too crowded, and so the unfortunate ones must wait two or three minutes (if they are lucky) for the next train.

I must say that the Metro rides always interested me greatly until warm weather set in; then it was evident even to me that soap was certainly at a premium in Paris.

The usual amount of interesting things went on in this particular car. Two GIs just fresh from the front had heard that all French girls could be had for the asking and were busy asking. . . . The neighboring French were greatly interested since most of them could understand a little English. I have never seen a race with more curiosity, just like gossiping neighbors in a small town.

It was evident that the day shift of "Babes" was going off duty from Champs Elysees and heading back to the little hotels they called home. A few of the more fortunate ones had managed to lure their GI boy friends home with them. In one of the corners a pair of "French lovers" were busy billing and cooing. I often regret that I did not have a camera with lens fast enough to take candid shots in the subways. The French "technique" has always interested me.

On this same car was a handful of the high class people who sort of huddled together and ignored both the queuing GIs and the necking couples. It was quite evident that they were disgusted with both types. Three drunken officers were busy telling each other about their latest adventures with the "Babes," and speculating on the night's adventures in "Pigalle." Yes, there is something about the Paris Metro that makes all types feel sort of democratic, or anyhow outspoken. . . . or maybe it was just the cognac.

I got off the train at Metro Barbes Rochehouart and start-

ed walking west down BVD Rochechouart toward Place Clichy dodging the usual "regulars" lurking at this Metro Stop for the troops on pass or stationed in a large warehouse. By this time, practically all of the girls had a fair command of English, but still used that old battle cry, "Allo, Babeel!" to attract customers. I ambled by the little dirty sidewalk cafes, stepped over the feet of five nations, and meandered around through the crowd which was beginning to gather, for it was now night in Paris, and all of the "Babes" were on the prowl.

I soon saw a couple of "white hats" and decided to trail them to see how genuine MPs conducted themselves in the midst of all of the sins, sinners and vice of the continent. They kept well to the street and in general avoided the surging crowds of GIs, "Babes," pimps, bums, beggars, kids, salesmen, hawkers, French soldiers, British soldiers, and Moroccan niggers, which in many places were already beginning to overflow into the street. No fights were in sight or hearing at this time, but that meant nothing since at best the street lights were dim and one could not even hear a gun shot over two blocks.

The two MPs, with me faithfully... and hopefully... trailing them, proceeded on down the street which already had changed its name to Bv'd Clichy. As is customary in the larger Paris streets, this one had a wide strip of earth down the middle, populated by numerous plain and fancy side shows, carnival rides and swings, girly-girly shows, honky-tonks, wheels of fortune, shooting galleries, etc., which were just beginning to get a play. The hush of late evening had given away to the muted mutter and mumble of the surging crowds.

All of the large and small cafes, joints, night clubs, bars, hotels, dens of vice, dives and other places were wide open and ready for the customers. Anybody with boceaups francs was welcome, except the MPs in uniform who were justly regarded with suspicion by both customers and operators. The two MPs I was trailing did not seem to be greatly interested in business, but carefully avoided all comers. It was noted that none of the prostitutes were ignorant enough to proposition them, though two or three did seem to know them by name by some queer quirk of fate!

At last, as if it were necessary to capture a victim at regular intervals, the two MPs sighted a likely victim sort of isolated from the crowd and descended on him in a business-like manner. This poor child of Ham immediately assumed a most innocent expression, when he saw it was too late to run. When politely asked for his pass, this soldier, dark of complexion and perhaps of deed, immediately put up a loud argument that some damn !?!* Frenchman had stolen his field jacket and cap. No suh! He was a good soldier and would never think of selling his uniform. He had never been in trouble and always tried to do what was right. He was just back from the front trying to have a little innocent fun with the girls before he had to go back.

And so with the patience that comes of long experience, one MP asked the soldier for his pass again while the other took a firmer grip on his club. He was standing slightly to the rear and on the right side of the "victim" just in case he should produce an open knife or pistol from his pocket instead of a pass. It was evident that the "victim" was worried by this MP and his plain intent; but he still had hope. "Pass? What pass?" inquired the soldier in the most innocent and ignorant manner. "I don't need no pass cause this very day I done drove my captain into town in my jeep, and he said I didn't need no pass. White folks is always picking on me." "What? Driver's license?" "I don't need no driver's license cause I is a good driver. Where am I billited? Well, it is this way. I been working hard and aint had no fun for a long time and know a little gal near here that will let me stay all night with her for only 500 francs. I don't need no billit."

And so with the same experienced manner, one MP searched the victim, while the other remained on the alert

slightly to the rear. They removed a long bladed jack knife and a rusty Belgian pistol from his pockets while he muttered and mumbled about his rights, that he was being unjustly persecuted, and that he would probably write the President about all of this stuff. The MPs filled out a data sheet and called a patrol wagon to take the victim off to the booking station.

And so the two MPs proceeded on down the street as before, passed the Cirque Medrano where all appeared normal and nosy as usual. Still no fights or throats cut, and so it looked like it would be a peaceful evening. They deviated up a side street and inspected the exterior of an "off-limits" cage, but no GIs or officers were visible. Only a few of the regular prostitutes, visiting citizens, and French soldiers occupied it as far as could be seen. The only way the French soldiers could be distinguished from our own GIs was by the color of their cap or tie.

The many cafes are very interesting to observe. Here, one may see all nations busy wining and, if they have the money, dining to the strains of various orchestras. Jazz, of course, was by far the most popular and could both be seen and heard as played by Russian, Chinese, Hindu, or any other type that the French owner might decide to dress or uniform his band. The better the establishment, the higher the class of customer, and they all come high.

Even the girls that work the place are better dressed and more elaborately groomed. It is considered improper for a "babe" to proposition even a drunken GI or officer on the street, but if he enters a place, he is fair game for any "babe" that has been licensed to operate in that particular place. In Pigalle, as well as the rest of Paris, only the very low class follower of the ancient profession will proposition anybody on the street. She just does not rate very high on the social scale, and generally turns out to be too old or too ugly to pass the test in the light unless the customer is very drunk, which is the normal condition of a large percentage of officers and enlisted men when they go to this area.

But all of this was old stuff to the MPs and myself, and so we strolled on down the street. When we came to the Moulin Rouge, or the famous Red Mill of Paris, I decided that nothing further could be gained by observing these particular MPs and entered the night club side of the building to see what could be seen, free. The waiters all looked hopeful, but when I sort of ignored them and went and sat down by myself and did not even order a drink, they looked disgusted and went in search of more likely victims.

I sat down mostly to rest my feet, and also to see if anything new had been added. The usual drunken crowd of GIs and officers were present. Lots of smoke, noise, confusion, cheap perfume from the "babes," dingy lights, etc., made a most romantic setting for this ancient establishment. On the small dance floor, the so far unsuccessful "babes" were dancing to the strains of a small jazz band and busy "spotting" the likely victims. I will say one good word for the "babe," unless one eyes her longingly, or motions for her to join you at a table, she will not do anything more than try to look more enticing than usual. They will not hang onto your arm or embarrass one on the street.

All girls in this place must be considered professionals, for the decent French girl is very particular what sort of a place she goes to. All of the girls pay to get entry to these established "hunting grounds." GIs and officers are not charged an entrance fee, for it has been discovered that they will spend all the money they have on very poor champagne or cognac if given free entry. The normal price is about 800 francs per bottle plus 90 francs handling charge for a bottle of champagne that cost about 90 francs at the winery, or 350 francs as delivered by the black market.

After a short rest, I proceeded on down the street from the Moulin Rouge toward Place Clichy. It was now about 2230 hours which is the most crowded time for Pigalle and similar areas. The Metro stops running shortly after 2300

hours, and so all that are going to their own billets must catch the metro or walk. A very wealthy person of course could hire one of the velotaxis, or sort of riksha, pulled by a man on a bicycle. Their rate is reasonable and amounts to about the value of the entire vehicle per mile. A price of 2000 francs is not unusual for a ride of less than one mile late at night and this is forty bucks as we count it in Missouri.

I stopped in at a booking station just to see what activities had taken place during the evening in that particular area. It had been rather quiet and peaceful. No shootings or stabbings so far had been reported. The robbery cases would not be reported until the next day when the GI or officer sobered up enough to realize the general situation. Many of them would be wondering about other things, and make a hasty rush for the nearest pro-station. Then they would spend the next three weeks "sweating it out," just wondering if or whom they had slept with... and why they had done so. This is the main reason why Paris well deserves the credit for over 50% of the cases of VD contracted in Europe each month.

A Booking Station is the MP name for a station house. Here the desk sergeant performs the same duties as the desk sergeant in police headquarters back in St. Louis. While I was there the "catch" from a "cat house" raid was brought in. I might state that all of the known "cat houses" are put OFF-LIMITS by order of the CG. But even the "Off-limits" sign means very little to a dusky child of nature who has not yet grown up, or to a drunk. This "catch" was very unsatisfactory, for only a few drunken GIs had been captured.

The raiding party decided that they could do better at another place, and invited me to go along. It was getting pretty late, but I am from Missouri and always interested. I might add that it was quite customary for MP officers to invite their friends to come along on duty status, for the friend generally never has had the opportunity to observe the interior of a "cat house" in Paris and the MPs are always glad to have an extra hand along just in case it is not an ordinary den of vice. It was customary for some of the GI black market operators to set up headquarters in "cat houses," and in case of a raid, some elected to shoot it out rather than face a general courtmartial board with 40 or 50 years in mind.

Just as a sort of warming-up exercise, the raiding party first visited a certain section that is off limits. We went into a very elaborate looking cafe, but no victims were in sight. This was off of the beaten track of GIs and I had never been there before in all of my prowlings about the streets of Paris. It was like all other cafes with one exception, it had not closed down around 2330 hours and the waitresses did not wear anything above the waist except maybe a ribbon or comb in the hair. I again wished for my camera, but a 3.5 lens is not sufficient.

I learned that it was very impolite to stare at the waitresses, and so we turned around and left in search of a better hunting ground. There are so many "cat houses" in Paris and so few MP vice squads that some probably will never be raided. This vice squad decided on one more or less at random and so we descended on a small one about two blocks east of the Palais Royal just off Rue Rivoli. It looked like any other small hotel except that it had an OFF-LIMITS sign over the entrance. It was near a hotel billiting U.S. Army personnel, and the "madam" mistook us for customers. She was a rather portly dame who had seen better days, and many of them, from her looks. She was all smiles and full of good French hospitality until the French cop entered and spilled the beans. In Paris, it is not considered good manners to raid the house of a French citizen unless in conjunction with the French Police, who I must say are, much more efficient than the average person believed. If a Frenchman gets out of hand and starts a fight or disturb-

William Altman '42 Still Missing in Action

Word has been received from the wife of William Altman, who is living at 3319 Indiana avenue, Kansas City, Mo., that Bill is still listed as missing in action. Bill was on a B-29 stationed at Saipan and was returning from a raid against Japan when his crew radioed their home base approximately 25 miles out that they were out of gas and were making a forced landing on the ocean. An immediate search was organized but no trace of the lost plane was found. Bill's wife writes that they are still hopeful that he will turn up on one of the islands in the vicinity in which he was forced down.

Capt. Leonard N. Larson '43 writing about Bill, said, "I saw him only once over here before he was 'Missing'; that was in late November 1944. I believe it was in the first week in December that his plane failed to return to base after a raid on Tokyo. As I understand it, the flux-gate compass became inoperative on the way home, and the radio was also out; the island of Saipan was closed in by weather and the Navigator could not locate the island. It is believed they ditched, from lack of fuel, within 50 miles of Saipan. As a flight engineer, he was one of the best and as a fellow buddy he was tops! No trace of the plane or crew was ever found."

5 Miners Hold Thanksgiving Party at Chase Club

During the Thanksgiving holidays five Miners had a party at the Chase Club in St. Louis. Those present were: Mr. and Mrs. Robert Dietz '44, Mr. and Mrs. Harold A. Krueger '42, Mr. and Mrs. Elmer Belew ex-'46, William A. Hubbard '44, and date; and Mr. and Mrs. Don C. Brand '44. A good time was reported by all at the party and all discussed their desire to visit the school and see the improvements that are being made on the campus. Elmer Belew plans to return to MSM in January and resume his studies after discharge from military service.

Dr. Stanley A. Trengrove Dies

Dean Wilson has received a telegram from Julian D. Conover, secretary of the American Mining Congress, informing him that Dr. Stanley A. Trengrove, formerly head of the Mining Department of MSM died suddenly on the afternoon of Dec. 28 at his home in Washington, D.C.

Dr. Trengrove came to MSM in September of 1941 as head of the Mining Department, remaining until March of 1944 when he resigned to go to Washington, D.C. to become editor of the Mining Congress Journal, which position he held at the time of his death.

Dr. Trengrove was buried Jan. 1, 1946, at Virginia, Minn., his old home. He is survived by his wife and two children, Margaret Jean and Harvey.

ance, it is not unusual for the police to take him around the nearest corner and calm him down with a few judicious kicks and licks with a club. This is much more effective than arresting him and charging him with disturbing the peace or some trivial thing. Anyhow, the "madam" realized what the situation was, displayed her license, and called upon all to witness that she had no U.S. Army "guests." Some guests were slightly annoyed at being disturbed but most of us could not understand French as it is spoken by a very angry and impolite Frenchman. The French policeman had a good command of the French language, as well as a tough hide. Nobody fell over dead, and so it was evident that the curses were not very effective. Meanwhile, other "customers" joined in on the barrage. Most of the "babes" did not express their opinions, and seemed to enjoy the situation.

It was a poor night for a raid. I suppose that Pigalle was getting all of the trade anyhow. And so I decided to drop off at my hotel when we passed near it, and call it a night..... no hits, no runs, and no errors.

Lt. Col. L. B. "Red" Hopkins ex-'25 Likes Army Life

A letter has just been received from Lt. Col. L. B. "Red" Hopkins from which the following is noted:

I wish I had had a few of these addresses I picked out of these two (Alumnus) publications you sent me so that I could have looked up one or two of the boys when I was in the ETO. I see Dan Kennedy up there on George Patton's Staff. I was into Patton's headquarters two or three times but always through Ordnance channels and then when I was around there my sole mission in life was to get in and out of his office as rapidly as possible. Ended up V-E Day in Linz, Austria. Things were not very active then—it was just a push over, but going into Cologne the 1st of March was a tough job; however, it was worth it. Never saw so much Moselle wine, champagne, and stuff to go with it in all my life. Damn good thing the Rhine was a barrier. The troops could not have found a better excuse to lay around the city ten or fourteen days.

Have been in and out of Aberdeen quite a bit since being on this job. Spent two winters up north. The best one was the winter of '43 and '44 when we were up in the Yukon. Had a visitor up there—Sir Hubert Wilkins who, even though he has a tin ear, was damned good company and a damned poor poker player. The boys took him for quite a bit of his royalties on his books.

"Red" seems to like the Army. During the first World War, Red was in the Infantry in the "Truman" Division. While thus serving, many unusual situations developed, in which Red played an important part.

Once, while Red was escorting a half dozen captured Krauts to the rear, one of the Krauts made a crack, in broken English, to the effect that these half dozen Krauts would not have been captured if they had not run out of ammunition. Red immediately threw his own guns and ammunition down on the ground and proceeded to take on all six in the "natural" way. He convinced them, and ever since, Red starts throwing his weight around whenever he finds himself in the company, however friendly, of anyone whose name has even the slightest Teutonic origin.

About 15 or 20 years ago, Red took part in the Nicaraguan Campaign. It seems that during a torrential rainstorm, a certain town in Nicaragua was threatened by inundation. The reports telling about the progress of an impending flood proceeding in the direction of the town, were coming in from all sources. Finally, all civilians and soldiers were ordered to stand-by for evacuation. Old Red, who had been sleeping all through the excitement, awoke, and wanted to know what was cooking. When told, he called for a squad of Volunteers and a load of dynamite. Leading the Volunteers through the storm, Red proceeded to a point known to him, planted his dynamite, touched it off, diverted the stream and saved the town.

For this act Red received the Soldier's Medal, the highest peacetime award. So, whether in Peace, or in War, Red seems to know how to keep situations from becoming dull.

Sigma Nu House Damaged by Fire During Thanksgiving Holidays

On Nov. 23 during the noon hour while all of the Sigma Nu's were home for the Thanksgiving holidays, a fire destroyed the interior of the three-story fraternity. Dean Curtis L. Wilson estimated the damage at approximately \$30,000.

Though the firemen did all they could to control the fire, furnishings and all of the fraternity members' clothing were destroyed, as the fire spread through the house rapidly. Firemen said they believed the fire was caused by spontaneous combustion from oily cleaning rags and mops in a closet. There were only two Sigma Nu's who remained in Rolla, but neither were at the house at the time of the fire.

Arrangements were being made to house the members in other fraternities on the campus and in private homes.

Advanced ROTC Reactivated

The War Department has notified Dean Wilson of the School of Mines and Metallurgy that the Advanced ROTC courses would be resumed on the campus at the beginning of the spring semester on Jan. 28. Maj. E. C. Richardson is professor of Military Science and Tactics.

The Advanced ROTC work was suspended in April of 1943, when all of the men in the Reserve Corps were withdrawn from school and placed on active military duty for further training in the army camps.

Under the new program beginning in January veterans honorably discharged or transferred to the Enlisted Reserve will be given credit for the active service in lieu of the basic course of the first two years of the ROTC program, on the basis of six months in service equalling a year of basic training, or a year's active service equalling the full basic ROTC program.

Those taking the Advanced ROTC work will receive approximately \$20 a month compared with a twenty-five cents a day rate paid before the war. In addition, cadets will be furnished shoes, overcoats and textbooks. They will get a much higher rate of pay at summer camps, and after earning a commission they will receive the statutory uniform allowance of \$250 at the time they enter upon a 3 months tour of active duty.

The advanced course will be open to students between 19 and 26 years of age who have an army test score of 110, or better, and who have sufficient High School credits in the School of Mines.

The advanced ROTC program was first undertaken at the School of Mines in 1922 following the last World War, with sixteen juniors and one senior enrolled. It has continued as a popular course down to 1943 and many of the MSM graduates who have taken this course have obtained distinction in military service in the current World War. In addition to the ROTC training program the School of Mines trained approximately 500 trainees for the Signal Corps at the beginning of the war. Some 500 students were also trained for the War Department under the ASTP program and through the Civilian Pilot Training program about an equal number of student pilots were trained on the campus.

The Air Corps has recently sent two representatives to the campus to survey facilities available here for the possible installation of an Air Corps ROTC in the near future. Action on this has not yet been completed.

Executive Committee Meets with Faculty

The Executive Committee of the Board of Curators met in Rolla Monday and Tuesday of Jan. 7 and 8 for its regular monthly meeting. In attendance were Frank C. Mann of Springfield, Chairman of the Executive Committee, Guy A. Thompson of St. Louis, and Stratton Shartel of Kansas City, all members of the Board of Curators. Also here for the meeting were Dr. Frederick A. Middlebush, President of the University, and Mrs. Leslie Cowan, Vice-President of the University. The meetings were held in the office of Dean Curtis L. Wilson in Parker Hall.

The Executive Committee gave particular attention to the housing of students and other matters of importance to the School of Mines.

The Committee attended the regular monthly meeting of the faculty on the evening of Jan. 8, at which meeting Chairman Mann, a former MSM student, addressed the faculty, expressing appreciation of the Board members present for the opportunity of meeting the faculty and expressing a desire to know each of them personally in the future.

Following the faculty meeting the members of the Board went to Dean Wilson's office where each member of the faculty was introduced to them.

The Committee adjourned Tuesday night until early in February when it is expected that that meeting will be also held in Rolla.

Radar

(Continued from page 1)

profound changes in the pattern of warfare. Surprise has always been one of the most important elements in attack. In the past, surprise has been achieved by the deployment of forces in the darkness of night or under a covering of fog, cloud or smoke. The early warning of enemy approach afforded by our ever improving radar equipments and the increasingly effective techniques for their use have made surprise attacks impossible.

Radar not only sees, it can also measure distance and angles when given suitable form. If the position of the radar is taken at the center (the origin) of a polar coordinate system, radar can measure the distance to a fixed or moving object—its radius vector—and the angles defining the direction of the radius vector to the object with such exactness that this location information can be used for the fire control of guns or for the dropping of bombs.

In 1939, when the war began, radar science was in its pioneering period. It could be used to a limited extent for detection of objects, principally planes in the air, but could not locate them with sufficient exactness that it could be used for either the controlling of the firing of guns or for the dropping of bombs.

As the war progressed our country's scientific and technological strength was applied with an ever increasing tempo to the extension of radar science and art. We quickly moved out of the pioneering period and, by the war's end, were in that of a mature technology. Advances were made in five years that in normal times would have required twenty.

Thus, not only the detection of enemy planes to great distances throughout the complete solid angle of space above the earth, but also the detection of enemy ships and submarines by our radar on land, on ships and submarines became an every-day occurrence. Detection from the air of the enemy's ships and submarines, his concentrations of mechanized armies, his cities and fortifications was a continuous routine of our radar equipped patrol planes. The measurement function evolved with such ever increasing accuracy—be the radar on land, on ship, on submarine or on a plane in the air—that at the war's end radar controlled gun fire and bombing rivaled in accuracy that controlled by optics. All of this by night and day and through cloud and fog!

When a new technique of warfare is equally developed and applied by the two combatants, it changes the style of war but is not apt to become a decisive element in victory for either side. However, if one of the combatants improves and applies the new technique at a more rapid rate, he then can make it an important and perhaps a determining element in his victory.

In the years immediately before the war, radar was conceived and had its pioneering development in the military laboratories of our country, England, Germany and perhaps Japan. At the war's beginning, German radar was almost the equal of that of our country and of England, while Japan's was decidedly inferior. However, as the war progressed, we advanced this new art and science at a more rapid rate than did our enemies. We applied it with amazing speed to every possible sector of warfare and supplied our armed forces with a tremendous volume of specialized equipments suited to a wide variety of applications. Our enemies advanced the technology at a slower pace and made available to their armed forces a smaller volume of equipments that were more limited in variety. Radar, therefore, became an item of great advantage to us. It shortened the war and made victory possible with much smaller loss of life than would have been possible in a war waged without its use.

Radar refers to no single instrument—it is a synthetic word that describes a function. Indeed an individual radar set may weigh only a hundred pounds and have the size and shape of a small bomb suited to installation in a fast airplane; or it may be a vast assemblage of equipment mounted

in a truck and several trailers having a giant antenna structure and requiring a whole company of soldiers to operate it. It may be a three-ton equipment disposed above and below the deck of a battleship, or it may be two or three watertight boxes on the deck and a small antenna on the mast of a landing barge. While radars assume this great variety of form and size, they are all governed by the same radio principles and employ the same techniques. Their functioning elements have in common electron tubes in large number and great variety inter-connected by most complex communication-like circuits. They all embody a transmitter to generate the radio energy in suitable form and at an adequate power level, an antenna designed to form a pattern in the shape required of radiated energy, and a receiver to "pick up" the returning energy "echoed" from the objects viewed.

Land Radar

As the war progressed an increasing number of applications of the land based radar were found. Space does not permit a description of all of them. Radar for early warning of the approach of enemy aircraft was of military value even with the relatively crude equipments of 1940. Through the advances in early warning radars and the techniques of their use made during the war, it is not now possible for an enemy plane to enter an area covered by our early warning radar equipments without its presence being detected and at a sufficiently great distance that time is available to alert and man our defenses.

Early warning land radars even though performing an identical functional task have assumed great variety in size, form and weight. At the one extreme of complexity and weight is that designed for protection of large and important military areas. It is a mammoth, permanent installation that makes continuously available information concerning the movement of every plane in the vicinity up to altitudes of some 50,000 feet and out to distances measured in many tens of miles. Friendly planes (as well as combat ships of the allied navies) are equipped with a complex electronic gadget integrated into the radar system operations, called IFF (identification of friend and foe), that permits the early warning radar to tell whether an approaching plane (or ship) is friend or foe.

At the other extreme of complexity and weight is the air transportable early warning radar. It can be readily flown into the area of its use. It has the minimum possible weight and is packaged into several compact units. Its units can be quickly combined and "set up" to operate as an early warning equipment. These air transportable units have been of greatest value in quickly establishing air protection for a newly won enemy area, such as a beachhead. The successful protection of Iwo Jima and Okinawa owes much to this type of lightweight early warning equipment.

After the presence of enemy airplanes has been established by early warning radar, attempt is made to bring them down by antiaircraft fire from the ground and by fighter plane interception and attack. Radar plays an essential role in both methods.

To direct the antiaircraft gun fire, a Fire Control Radar is employed. It has properties suited to the tracking of a single plane and to continuously supplying data of the plane's exact position. This radar has an extremely sharp beam, like a searchlight. Because of the sharpness of its beam, it finds its target with difficulty so its beam is placed "on" the selected enemy plane by the early warning radar. The selected plane is then tracked by the fire control radar, which continuously tells an "electrical brain"—the Gun Director—the angle at which to point the antiaircraft guns and the time setting of their fuses so that a lethal hit can be made.

Our attacking plane—called an Interceptor—has a special radar built into its nose that permits it to follow the enemy plane—once it is "on"—regardless of visibility and to close with it for a kill. Like the antiaircraft radar, the interceptor generally needs to be placed "on" the selected enemy plane.

This is accomplished by radio telephone directions to the interceptor from the ground crew that is observing the positions of our interceptor and the enemy plane by still another type of radar. This radar, known as a Ground Control Interception Radar, also has special properties suited to its purpose.

As the war has progressed, radar directed antiaircraft fire and radar guided interception have become increasingly effective against enemy plane attack. In World War I neither antiaircraft fire nor plane interception were at all effective. In this war both methods of attack have been made potent by the new radar and electrical director science. Radar directed antiaircraft gun fire and interceptor planes were used to defend London against the Buzz bombs—the German V-1's. One Sunday late in August 1944, 105 buzz bombs flew over the Channel and crossed the British coast headed for London. Only three of them arrived. They were all that survived after antiaircraft and interception attack. The Ground Fire Control Radars, the Interceptor Plane Radars and the Electrical Directors employed were of our country's development and production.

Ship Radar

In recent weeks several of the principal ports of our country have been visited by large numbers of ships of different classes from our fleet. These ships have been inspected by several millions of our citizens. They have observed that ships of all classes have bristled with radar antennas, large and small and having great variety of form. Radar is ideally suited to naval warfare. There is no area of warfare where the possibilities of radar have been exploited to a greater extent and to better advantage than here. Battleships and cruisers display a dozen or more radar antennas and even the relatively tiny PT boat gives antenna evidence that it too employs radar in its fighting tasks.

Search for the enemy and early warning of his presence are of paramount importance to our Navy in its strategy of attack and defense. Radars have been developed and supplied to the fleet in great variety that fulfill its search and early warning needs. Some are specially designed for seeing enemy planes at great distances, whether they be near the water's surface or at elevations of some 50,000 feet. Others have properties essential to the detection of ships and submarines, even when the submarine is partially submerged. They are capable of detecting all craft that are in the area within the horizon of the searching ship. The great variety of radar eyes that guard our fleet makes it impossible for it to be caught off guard. The captain of every ship always has up-to-the-minute radar maps that display and give approximate locations of all planes and ships—friend or foe—that are within his line of sight. IFF enables him to differentiate between friend and foe.

After the enemy has been detected, he must be attacked and destroyed. The ships of all classes of our Navy have a tremendous fire power. Our Navy's experiences early in the war brought about a large increase in the number of guns mounted on each ship, especially those for use against attacking planes. The planes of the aircraft carriers that form a part of every naval task force, as well as the planes based on battleships and cruisers, add to the attacking power of the fleet. Radar directs the fire of substantially all the guns of our fleet and is an integral part of the attacking gear of the ship-based plane. Without radar our fleet, as an instrument of attack, would be seriously limited by darkness, by low flying clouds, by fog and by smoke screens created by the enemy.

Our Navy had radars to control the fire of many of its guns used against ships and planes at the beginning of the Japanese war. They have been constantly improved and brought to substantially the same level of accuracy as that of optical fire control. From the early days of the war, the proportion of the guns of our fleet whose fire is radar directed has steadily increased.

Our naval victories of 1942 in the Solomon Islands area, when the Japanese naval forces materially outnumbered our own, were made possible through the use of our superior search and fire control radars in night-time engagements. On many occasions the radars of our battleships, cruisers and destroyers probed the darkness with their invisible searchlights and discovered the presence of enemy vessels many miles away—frequently more than eight. Throughout the Pacific war the guns of our fleet were repeatedly trained on and fired at enemy vessels unseen except for radar. Again and again enemy vessels were sunk by day as well as by night on the second or third salvo without our having seen them. However, we know that they were sunk because the "pip" indicating their presence disappeared from the trustworthy radar screen.

Our submarines have built their strategy of attack around radar. Its use has been most vital to their protection. We owe to radar the sinkings of the tremendous tonnage of Japanese merchant shipping and ships of war with relatively small loss of our submarines. In a Guam dispatch of May 27, 1945, Admiral Nimitz reports that our submarines had sunk since the war's beginning 1119 Japanese ships, of these 126 were ships of war. The total tonnage was 4,500,000 tons.

Through radar our submarines hunted at night. The up-to-the-minute radar map of the submarine's surroundings made it possible for it to locate the Japanese ships and to "close in" on them to within torpedo fire range without detection. Radar information directed the torpedo fire with greater accuracy than possible with optics, by day. A submarine cruises a long distance from its home base. It can carry only a limited number of torpedoes. An increase in accuracy of fire is equivalent to a proportionate increase in our number of submarines. Radar is indispensable to the submarine.

Airborne Radar

The airplane has added a new dimension to warfare. It was used to a limited extent in World War I, but it played only a minor part in the strategy of the war. It came into its own in World War II. It determined the victor to a greater extent than any other one facility. Airplanes of many types, sizes and functions were developed for war use and they were produced in tens of thousands. Radar with properties suited to the tactical use of every type of plane was developed and produced in large quantities. The mightiest plane for strategic bombing—the B-29—as well as the "small as possible" carrier based patrol plane was equipped with a radar specially suited to its tactical purpose. Without radar the airplane, without doubt, would have occupied a much smaller place in the strategy of this war. Space does not permit a story about the great variety of airplane radars in the area between the mightiest and the least.

Radar made its greatest air war contribution in strategic bombers—B-17, B-24 and B-29—used radar bombsights initially to supplement optical bombsights. Battle experience soon demonstrated that there was so little time in which visibility, from the high altitudes at which our bombers flew, was adequate for optical sight bombing that highest priority was given to the research and development necessary to improve the accuracy and facility of radar bombsights. Before the end of hostilities the bombing role of optics and radar was reversed. Radar became the primary bombing facility and optics the standby facility used only at such times as visibility made it possible. Were it not for radar, the tremendous destruction of the German and Japanese production fronts might well have been impossible. Certainly it would have required a much longer time.

Radar use in carrier based planes probably ranks second in importance as well as in size. The carrier based plane takes off from its flight deck—a pin point in the vast expanse of the ocean—and proceeds on missions of great variety against the enemy. Until radar was available, the most difficult task of the pilot was the location of his objective and,

upon completion of his task, the return to his carrier. Radar tremendously increased the probability of his locating the enemy and of his carrier ship upon the completion of his mission.

One of the carrier pilots in reporting on his use of radar said: "Radar is essential to the many jobs we are called upon to do and those jobs include not only the searching out of enemy targets, navigating in strange territory and homing to our carrier, but also helping us to fly in, over and around rain squalls and by pointing out targets through overcast." In speaking of a particular mission he said: "We approached the island above the overcast and were well oriented through the use of our radar. The position of the target field was easily determined in bearing and distance from the coastline and a winding river clearly displayed on our radar map. We made a surprise and successful attack, doing much damage to air field installations and returned successfully home; our navigating task made easy by our radar."

Radar Research and Production Effort

Radar's early pioneering days were spent in the laboratories of our armed forces. It entered a few of our industrial laboratories in 1938 and 1939. In mid 1940 with the formation of the National Defense Research Committee, many of the scientists from the research laboratories of our universities were gathered together in new laboratories at Massachusetts Institute of Technology to further advance radar science. From mid 1940 the research and development effort of military, industrial and newly created laboratories of the NDRC increased at a tremendous rate.

The production of the radars developed in these laboratories got under way in the manufacturing plants of a few of our communication equipment manufacturers in 1940. The scope and magnitude of the research and development effort made available new radar designs for production in an ever increasing volume. This necessitated the extension of the production effort to almost all of the communication equipment and electronic component manufacturers of our country. During the interval from mid 1940 until V-J Day our country's production of radar equipments and associated facilities had a dollar volume slightly in excess of three billion. This industry at the same time produced communication facilities and other instruments of war of communication and electronic equipment character in dollar volume of the order of seven billion. In order to accomplish this tremendous production task, our communication and electronic industries were expanded several fold. The dollar volume of radar was by a large margin greater than that of any other

electronic instrument of war.

The organization with which the writer is associated, the Bell System, made the largest contribution to research and to the development and production of radar of any industrial organization. Its research and development contribution was made by its research corporation, the Bell Telephone Laboratories, and its production contribution by its equipment manufacturing corporation, the Western Electric Co.

In its development of one hundred different radar systems and the electronic and communication-like components essential to them, the Bell Telephone Laboratories expended some 83 million dollars during this five year period. Sixty-five of the radar systems were produced in large quantities by the Western Electric Co. These equipments were extensively used in all theaters of war by our Army, Navy and Marine Corps, and some of them were supplied under lend lease to our Allies. Approximately 53,000 different systems of these sixty-five types were delivered to the Services. The dollar volume of this production was approximately 900 million. The Bell System's effort is somewhat in excess of one-fourth that of our country's. These data on the number of system types developed, the number produced and the quantity of systems delivered by the Bell System can be taken in their proportion as an indication of the total effort of our country.

Radar in the Peacetime World

While the volume of radar research, development and production for peacetime applications will be several hundred fold less than that for our military uses, radar will play an important part in our normal activities. In time, radar will make air and sea navigation continuous, foolproof and much less hazardous regardless of night or weather. Its land transport applications are subject to more conjecture. Radar technology will have to make striking advances in certain directions before radar can play a sizable role as an aid in land transport. There is basis for doubt as to whether its role in this area will ever be comparable to that for air and sea.

The indirect effect of the war radar programs on our future normal activities is tremendous. The large volume of electronic and electric circuit research and development that made radar this war's most important new weapon has made available a tremendous volume of new technology. This new knowledge will lead to an accelerated advance in the applications of electronics to industry and will greatly accelerate the application of communication, both radio and wire, to our daily social and business life.

Faculty Changes

At the December meeting, the Board of Curators appointed Dr. Roger H. Cowie assistant professor of geophysics in the Geology Department. Dr. Cowie received his B.S. in 1938 from the California Institute of Technology where he majored in geology. His graduate work, with a major in geology and a minor in physics, was taken at the University of Minnesota, where he obtained his M.S. in 1940 and his Ph.D. in 1941. While at the University of Minnesota he held a Standard Oil Company of California Fellowship in geophysics. In 1941 and 1942 Dr. Cowie was associated with Seismograph Service Corporation. In 1943, he served as an instructor in physics at Oklahoma A and M College until he was called to active duty in the Navy. He was released to inactive duty as a Lieutenant (jg) in Nov. 1945, after having spent 18 months as a navigator in the air arm of the Navy in the South Pacific.

Dr. Cowie arrived in Rolla Jan. 1 and has temporarily taken over the courses formerly taught by Dr. J. S. Cullison. With the start of the new semester, Dr. Cowie will handle the courses in geophysics which recently have been added to the Geology Department.

Capt. R. F. Davidson '41 has been employed as Instructor in the Mechanics Department. Capt. Davidson graduated in

Civil Engineering from MSM in 1941 and was employed by the Illinois State Highway Department prior to entering the Army. He was instructor in the Army Officers Candidate School at Fort Belvoir for some time and later did the same type of work for the Army in England. On going to France following the invasion he was engaged in construction work with the Army in that country.

Fred will take up his new duties on Jan. 28.

Dr. Thomas Day, Associate Professor of Chemistry, has resigned and after March 1 will be connected with the Carbide and Carbon Chemical Corporation of Charleston, W. Va. Dr. Day has been on leave for the past two years working on problems relating to the atomic bomb.

Dr. James S. Cullison '30, Assistant Professor of Geology, has resigned, Jan. 1, to accept a position as Paleontologist with the Creole Petroleum Company, a subsidiary of the Standard Oil Company of New Jersey. He will be stationed at Caracas, Venezuela.

Jim has already left for that country. His family will spend the winter with Mrs. Cullison's mother in West Plains and join him in Caracas in the spring.

Lucy Wortham James Scholarships Awarded



Left to right: Raymond B. Jones, Jack Y. Nomi, Charles E. McFarland, Dean Curtis L. Wilson, Paul M. Bennett, Frederick R. Richardson and Wilbur P. Tappmeyer

The six scholarships that have been made available to MSM students for the past several years by Mr. Ralph Hayes and Mr. Greenough, Trustees of the James Foundation, were awarded at a special assembly held on Dec. 19. Dean Curtis L. Wilson announced the awards. Those receiving the scholarships were Paul M. Bennett, Junior, Mechanical Engineering; Raymond B. Jones, Senior, Ceramics; Charles E. McFarland, Freshman, Science-Physics Option; Jack Y. Nomi, Senior, Electrical Engineering; Frederick R. Richardson, Senior, Metallurgical Engineering; Wilbur P. Tappmeyer, Junior Chemical Engineering.

The recipients were selected, on nomination by members of the faculty, by a special faculty committee consisting of Prof. R. Z. Williams, chairman, Profs. C. H. Black, C. E. Boyd, O. A. Henning, R. M. Rankin and J. M. Willson.

Sigma Pi's Buy New Home

The Sigma Pi fraternity has purchased a new house at 206 East 12th street and have moved into it and expect to be ready for the increased enrollment which will come on Jan. 28. The new home has facilities for housing about 35 boys.

The Sigma Pi's closed down in the summer of 1944 but opened again in the spring of 1945 in the School house where the professor of Military Science and Tactics had formerly lived on the corner of the campus across from the gymnasium. This house was small and Larry Bahn, president of the chapter, with Dr. Paul G. Herold as Advisor, decided after consultation with the chapter, to buy a new house and be ready for the increased enrollment that is coming with the return of the boys from military service. The new home is two and a half blocks from the campus and is well suited for a fraternity house.

The chapter extends to all Sigma Pi's a cordial invitation to visit the new home at any time they visit the campus.

MSM Alumnus Remembers His Alma Mater in Battle

Lt. Joe Adams, mechanical engineering graduate of '43, while leading his men in an attack on the Krupp Works last winter in Germany, remembered the needs of his old school. Just as Joe and his men appeared in the entrance of the building, the last Kraut in the plant left the opposite entrance for taller timber and a safer locality. Their tool boxes were left open on the factory benches. Joe followed in hot pursuit with his carbine in one hand and with the other filled his pockets to overflowing with precision instruments and gauges, which he later presented to his old school.

Pyrites Deposits of Missouri

A Bulletin describing the Pyrites Deposits of Missouri, by Dr. Oliver R. Grawe, Chairman of the Department of Geology of MSM has just been published by Missouri Geological Survey

Approximately 250,000 tons of pyrites valued at more than three-quarters of a million dollars have been produced principally in three counties in Missouri; Crawford, Franklin and Phelps. Fourteen pyrites mines and 77 prospects are described in detail in the report which comprises 12 chapters dealing with the history, mode of occurrence, mineralogy and origin of the deposits. Approximately 40 minerals are described including one believed to be new, a hydrated ferrous sulphate ($\text{FeSo}_4 \cdot 4\text{H}_2\text{O}$), to which the name starkeyite has been given. The minerals have been studied with the polarizing microscope, the X-ray and the spectrograph. The spectrographic analyses were made by Dr. S. R. B. Cooke, a former member of the MSM faculty. The report is illustrated by 17 plates and 8 figures. All of the photographs, except one, were taken by Dr. Grawe. A bibliography of 7 pages and an index of 24 pages are included.

The report is one of the most systematic and one of the most detailed publications ever written dealing with a single type of mineral deposit in Missouri. Since most of the commercial pyrites deposits of the State have been found in association with sink structures, this unusual type of deposit is discussed in detail. Less attention has been given to the pyrites deposits associated with the complex cobalt-copper-lead-nickel ores of Madison County and to the pyrites associated with the coal deposits, although a chapter is devoted to each of these modes of occurrence.

The author summarizes the various theories of origin of the pyrites deposits associated with the iron-ore-bearing sink structures of the Ozark Plateau, clearly lists the facts bearing upon the origin and reaches the conclusion that the deposits are supergene.

Dr. L. E. Young Suggests Bulletin Describing War Accomplishments

In a letter to Dean Curtis L. Wilson, dated Nov. 15, 1945, Dr. L. E. Young, former head of MSM, suggests that a bulletin describing the contributions of the alumni to the war effort be published as a part of the 75th Anniversary celebration. Dr. Young's letter follows:

Dear Dr. Wilson:

During my recent trips to various parts of Canada for the Canadian Royal Commission on Coal, I have talked with some of the alumni of the Missouri School of Mines about a matter that may be of interest to you. So I am writing this note to tell you all about it.

During the war a number of the alumni, faculty, and undergraduates, both in and out of uniform, have served the country with distinction in scientific, technical and industrial work. Some of the work has been outstanding. Undoubtedly men in the engineering organizations of the army, navy, and air corps have merited commendation for technical work they have done. Now that the war is over and the story can be told, why not tell what the Missouri School of Mines men have done?

In 1946 the School of Mines will reach its 75th year. The suggestion is that the School publish as an anniversary volume in its Technical Series (or otherwise) a series of papers describing the technical and scientific work done in the war effort by alumni, faculty, and undergraduates.

If there is any serious problem about the cost of such a publication, in my opinion, there would be a number of alumni and friends who would be willing to support the volume sufficiently to make the publication possible.

The purpose of the volume would be to make a record of the work done, to honor the men who have done the outstanding work, and to emphasize the contributions that science and technology made to help win the war.

Two Miners Against the Japs

(Continued from Oct.-Nov. Issue)

"The Japs let me go on my own," Bob said, "I had given my word to Gen. Wainwright that I would come back and the Japs had threatened reprisals if I did not. I started on foot from Naga on the afternoon of May 26, 1942. I went to a little village and began seeking information on how to get in contact with the guerrilla leaders. I got word of four of the main guerrilla leaders and thought the best thing to do was to arrange a meeting among the five of us; consequently, I sent word to them suggesting a meeting place. My time was short. I was supposed to be out only six or seven days.

"When I got close to the town in which the meeting was to be held I came down with malaria and could not make it. One of the guerrillas sent out a squad of men who took me to the leader's camp, but none of the others showed up. This leader refused to surrender. He was really a bandit living off of the people and when I had recovered from malaria a couple of days later and wanted to return he would not let me go and accused me of being a German spy working with the Japs. About a week later, however, the Filipino came in who had worked with me in the earlier part of the war and he identified me.

"I got out of the German spy deal but they would not turn me loose because they said the Japs would torture me and make me lead them to their camp. I was kept there for two months. One night the Japanese attacked the camp and everyone left and I left too. I took off and went to the coast and waited for a Jap patrol to come along and turned in to them, keeping my word with Gen. Wainwright. The Japs knew I had been a prisoner of the guerrillas from some of the men from the camp that they had captured.

"The Japs took me back to Naga and then to Legaski. From there I went on to Manila by boat but I never did get to report back to Gen. Wainwright as he left just before I got back to Manila. In Manila I was sent to the Bilbib prison."

Bob saw Pat Hell while he was blowing bridges in southern Luzon and visited his mine but he did not see him in the prisons in Manila. Pat was shot and killed by the Japs in Los Banos prison in Manila.

Bob stayed in Bilbib for two months and then went to Osaka in Japan. Here the food was not bad but there was a lot of beating and silly exercises and "learning the Japanese way of life." He was there for nine months.

In the meantime Gene had remained at O'Donnell. "There was not much change from the time Bob left," Gene stated, "The fellows continued to die until some time in August when they started shipping the Americans out and segregating them from the Filipinos. There I got sick. I was up and down with malaria and dysentery all the time. On Aug. 1, most of the Americans were gone, moving into the Cabanatuan Prison Camp. About that time the Japs moved up one of the best American hospitals from Bataan with full equipment in order to care for the thousands of sick Filipinos they had there. They wished to win the Filipinos' friendship, in a changed attitude, thinking it would be easier to handle the Filipinos on the Island. They gave them complete medical care. There they made a big mistake. They brought in lots of medicine and let the American doctors administer the camp. The Filipinos thanked the Americans and not the Japs. The Japanese were very stupid that way."

Gene stayed at O'Donnell until Oct. 12. At the time he left he asked the Graves Registration Officer what the deaths had been and he was told it was 1530 Americans and 27,000 Filipinos. That last figure they could not be sure of for the Filipinos were dying so fast they could not keep a record of them and also many of them went "through the fence" and the Japs, in order to save face, registered them as dead. Gene said that there had been pictures published recently in American newspapers showing what was said to be the

end of the death march at Camp O'Donnell, with Filipinos carrying boys out of Bataan swung in blankets on poles. This, he said, was really the Filipinos carrying the dead from Camp O'Donnell. The pictures had been taken from Japanese sources. On the top day at Camp O'Donnell 450 Filipinos and 50 Americans died. At first the deaths were so numerous that they could not give the dead a Christian burial. They did the best they could. At one camp there were no chaplains at all and some of the fellows read the burial services. Sometimes even this was impossible.

Gene stayed at Cabanatuan for three weeks and there the graves registration was 2900 dead Americans. They died of starvation, dysentery, malaria and diphtheria with no medical care. Gene left this camp with the second large group of Americans who went to Japan, some fifteen hundred. They were put on about a 5000 ton freighter. It was one of the worst things, with the exception of O'Donnell, that Gene experienced. They put 600 men in the forward hold, an area of about forty by sixty feet. They had the men in two tiers; they could stand but they could not lie down and had to take turns sitting down. He was in that position for 19 days with no sanitary facilities whatever. Seven of the men died on the boat.

The group was split up at Moji, Japan, and 500 went to Tanagawa Prison Camp. Gene was executive officer of what was called the hospital in the Moji camp. There they lost 20% of the men that winter. The hospital was just a room with no medicine and no doctors for quite a long time. There were no facilities at all; the men just came in there and died.

On Aug. 1, 1943, the Japs shipped the officers out sending them to Osaka. In February and March the Japs had sent the records from the Tangana camp to Osaka headquarters camp where Bob was, and there Bob saw Gene's name and knew he was all right. Bob was at the station when Gene's group came through. This was the first time they had seen each other since they parted at O'Donnell. They could not say anything but they waved to one another. "It was a sight for sore eyes," Bob said.

Both boys went on train and boat down to Shikoku Island to the Zentsuji Prison Camp, an officers camp of about 700 allied officers, British, Australian, Dutch and American. There Bob and Gene got together and could talk once more. The first topic of conversation was, "What did you have to eat at your camp?"

The boys stayed there until June 1945. All the embassies had sent their libraries down to this camp and they had plenty of material to read. It was the first camp in which the Japs would let the prisoners read and play cards. They had newspapers in English. "The war was going good for them then and the Japanese did not mind letting us read the papers," Gene said.

The Japs tried to run that camp in accordance with international law but there was still hazing, beating, slapping around and the men still had to bow and salute all of them. Bob was beaten one time for buying cigarettes when he should not. They were thrown into a cell and made to take off their shoes. It was November and cold as could be. There were four men, Bob, Gene and two other fellows. They were punished continually for minor infractions of rules. The Jap guards were entirely unpredictable and one did not know whether the one coming up was going to give him a cigarette or slap him in the face.

As Bob and Gene took up their bunks in the Zentsuji prison camp, they noticed a young fellow alongside with a familiar look and found it was Robert P. Powell, a graduate of the School of Mines in 1940 and who was taken prisoner at Corregidor.

Here, Gene said, was perhaps the most amusing thing that he saw during his imprisonment. This was an army contonment area of a calvary outfit and an army food warehouse and a bakery for making hardtack adjoined the prison camp with only a fence separating the two. When the food got bad

the boys got desperate and for a year they raided this bakery and meathouse at night. Then the food got so bad that as many as 20 to 25 men were at times in line waiting to go across to get something to eat. The Japanese probably knew that the Americans were stealing this stuff, but the Japanese themselves were stealing so much their records were so mixed up they could not tell what was going on. Finally one night they caught a bunch of American boys and "it sounded like the thundering herd to hear those fellows running back across the board floors and jumping into their bunks," Gene laughingly remarked. They caught four of the boys and the camp was alarmed not knowing what the Japs would do. In the Philippines the men would have been shot but, surprisingly enough, they tried to get the whole story and starved the boys they had caught for awhile and then turned them loose. The Japs themselves were involved in stealing and also they were afraid any punishment of the boys might become public knowledge and would give them adverse publicity about their feeding of the American prisoners.

On June 1, 1945, the boys went to the Roku Roshu prison camp on the Honshu Island. The Japs were afraid of landing at the camp they had just left. All the American officers were sent to Roku Roshu. This was a camp far up in the mountains and they had to walk up to the camp, as the trail would not permit a truck to pass over it.

There they started a work program. The boys had to work four hours a day. The Americans were talking back now and while the Japs wanted them to work eight hours a day, they compromised and said they would work four hours a day. They told the Japs their government would courtmartial them if they worked more than four hours a day. Bob said, "Even at that we goldbricked all the time. You could get by the Japs more than anything else after we got over into Japan by just looking them in the eye and talking them down. You could not do that in the Philippines, however, as they would just shoot you there."

The men were not called prisoners until Nov., 1942, when they got to Japan. They were just captives and not entitled to anything while in the Philippines. "You are not an officer, you are just No. 169," the Japs would say when the boys would protest. The officers had it worse than the enlisted men. "They tried to haze us more and they tried to make us lose face."

The newspapers stopped flat at the camp right after the Americans landed in Europe. The Japs had been, up until that time, publishing very true accounts of the German war. Their own battles were distorted. "They sunk battleship after battleship according to the Japanese newspapers," Bob declared. "Every time they had an engagement they would sink our entire fleet. They even had a national holiday one day celebrating the sinking of the entire American fleet after the battle of Saipan.

"They even told us that their submarines had shelled Salt Lake City," Gene laughed. "They would put that stuff in the paper. At one time they had a writeup about how one of our planes was chasing one of their own planes, the Jap having run out of ammunition. He had two rice balls in his lunch kit which he tossed back at the chasing American and the American, thinking they were bombs, dived into the sea!"

Here, too, at Camp Roku Roshu, they were always hungry. Bob said that his funniest experience was when they got some Red Cross stuff last winter. The boys were desperately hungry and had been for months, and in spite of this they all laughed when they saw some boys sitting around mixing powdered milk and canned butter, whipping it up trying to make whipped cream. They would sit for hours whipping this canned milk and butter, thinking up recipes of what they were going to do with it, of new ways to spread it and to make it go as far as they could. In the camp they were always talking about food.

The civilian guards at this camp were, for the most part, friendly and kept telling the boys that the war was over and

they were soon going home. They seemed to realize that the thing was about to come to an end. Here, however, they were shut off from news almost entirely.

"About the day after they dropped the atomic bomb, the camp commander went on a tear and stormed around," Bob said. "He said we were using a new secret weapon that was inhuman and that they had protested to Geneva. He made things tough. He cut out the chow and made us work harder, but it did not last long for the war did not last long after that."

"We had a lot of trouble at that camp," Gene said, "They gave us a lot of food and then they would cut it down and we would strike. Then they would cut the food to nothing and then we would go back to work again. We surely measured that food out on a scientific basis," Gene laughed, "They used to send the rice into camp in a bucket. The man who distributed the food had a critical eye and from long experience he could judge about how much each fellow was going to get. He had little cups he had made from tin cans which varied in size. These were mounted on a plunger. He would judge from the bucket how much each fellow was going to get, jabbed this plunger into the rice and bring out just so much. Thus, each got exactly the same.

"This made it hard on the big fellows because they had more body tissue to sustain than the smaller ones. Some of them lost from 70 to 80 or even as much as 100 pounds. Also, at the first, the very young boys, 18 or 19 years old, who had gone into the army to see the world seemed to crack up first. They had not been on their own long enough to adjust themselves to the terrible conditions under which they had to live. They just lost hope and gave up. The men in their fifties and sixties came through very well. Once they made the death march out of Bataan and got to the camp they were all right. They seemed to be able to resign themselves and did not seem to require the food the younger men required."

The food at Zentsuji kept getting worse and worse. They started with approximately 3000 calories per day and just before the surrender they were down to around 1200 calories per day. The vegetables kept getting less and less. They were getting around a half pound of rice a day cooked with very little meat.

At Roku Roshu the Americans bombed a nearby city pretty hard and killed horses. The Japs stripped the meat off and sent the bones over to the camp for the American boys. "You could smell that coming a hundred yards," Gene said. "Yes, but it tasted good," Bob replied. "The doctors passed on it and said it would not hurt us if you could stand the smell. We ate cats, dogs, snails, snakes, snake eggs, mules and salamanders and water dogs. For vegetables we used burdock and sweet potato tops all boiled in water. The doctors told us to boil everything."

On Aug. 16, the Japs wanted the boys to dip out the "penjo" (latrine). They used the contents of the latrine as fertilizer and they wanted the American officers to carry it out and put it on the fields. The boys refused and things went round and round. Finally the Japs told them to do it or else and got pretty nasty. "We had an awful day," Gene said. This was to be a permanent task from then on, but on Aug. 17 the officers said that no enlisted man would work. "We knew then that there must have been an armistice because they had worked these enlisted men steadily all the way through," Bob stated.

But there was no word of the cessation of hostilities until Aug. 22. Then the officers with the rank of Colonel or beyond were called into a small room and told that "For the good of the world the emperor had graciously ceased hostilities." Without ceremony one Colonel opened the door and shouted to those waiting anxiously outside, "The war is over!"

Then the celebration started. The Americans demanded the rifles from the guards and the swords from the officers.

One of the Marines from Guam who had not been searched too carefully had smuggled in and kept through all of his imprisonment, an American flag. "We put up a flag pole and had the Japanese guards all lined up and we stood in formation and raised the American flag," Gene said. "The Japs and all saluted; it was quite an emotional scene. It is something I will never forget. Some of the fellows who had taken the Jap beatings and insults without a whimper were crying openly. In fact, men were bawling all around," Gene stated.

The Jap attitude changed completely. A couple of days after the ceremony they brought over about seven watermelons for 350 men and said it was a present from the Japanese school children in a nearby school in order to promote better understanding. They also brought in lots of other food. But the biggest treat of all was when six B-29s dropped American food on Sept. 2. They were around dropping food for two hours and the boys went crazy. The commanding officer had set up a detail of 50 men to pick up the food and bring it in and parcel it out. But it did not work; everybody ran. When the parachutes came down a case of food would break open and cans of American peaches would start rolling around. It was grabbed up and soon the GIs were sitting around "going to town." Some of the boys ate so ravenously they got sick, but they would relieve their stomachs and go back and eat some more. The 350 men ate the loads off the six B-29s in three days.

Bob weighed 140 when he was captured and weighed 120 pounds when released. He now weighs 152. Gene weighed 135 when captured and weighed 103 when released and is now up to 124.

It was over at last and Bob and Gene, now both captains, started for home. Bob Powell remained in the Philippines. His home was in Manila but his entire family had been wiped out by the Japs. His father and brother had been killed and his mother had died of an operation. He was staying trying to salvage something out of his father's estate.

Bob said as he came into Golden Gate on Oct. 20, of this year, there was a lump in his throat as big as a pumpkin and Gene said he felt about the same way.

Both boys think MacArthur is the ideal man for the job of ruling the Japs. "He has the most haughty bearing and that is what gets the Japs," Gene said.

MacArthur met the emperor without a tie which to an American would be nothing but to the Japs was worse than a beating, the boys declared.

The boys do not know yet what they will do. Bob may stay in the army and make it a career or he may return to school and take a master's degree in Ceramic Engineering. Gene, too, is undecided. He will either come back and take a master's degree in Mechanical Engineering or go to work.

Each of the boys wears three Presidential Unit Citations and four battle stars—and what battles they represent!

Maj. Oscar E. Grewis '37 Receives Bronze Star

The following citation was recently awarded to Maj. Oscar E. Grewis for meritorious service in the Philippines:

Major Oscar E. Grewis, 0352862, Corps of Engineers, United States Army. For meritorious achievement in connection with military operations against the enemy on Luzon, Philippine Islands from 9 January 1945 to 30 April 1945.

Maj. Grewis, executive officer of an engineer combat battalion, demonstrated exceptional ability in the performance of his duties. He personally supervised the most critical projects of his battalion, which because of his tireless energy were brought to completion in time to support even the most forward elements of his division. In carrying out his duties, he frequently exposed himself to enemy small arms and artillery fire. Maj. Grewis through knowledge of his work and vigorous prosecution of his duties directly affected the successful accomplishment of his battalion's missions and is deserving of high praise.

St. Patrick Was An Engineer!

Perhaps the strangest St. Patrick's day celebration in all of the celebrations that have taken place in honor of the Patron Saint of the Engineers was held by three graduates of MSM on March 17, 1945. These were Bob Silhavy '41, Eugene Boyt '41 and Robert P. Powell '40. All three had been captured in the fall of Bataan and had survived the Bataan Death March, the horror of Camp O'Donnell and the shipment from the Philippines to Japan, jammed in the hold of small ships.

As Bob Silhavy and Gene Boyt took up their bunks in the Zentsuki prison camp in Japan, they noticed a young fellow alongside with a familiar look and found it was Powell. They talked over old times, about their experiences at MSM, and decided that come March 17, they would have a St. Pat's celebration.

This took careful planning. About the middle of January, they got a supply of Red Cross material and in it was a small quantity of raisins. Looking ahead to March 17, the boys put this into a brew to make some wine for the occasion. They also saved from their meager Red Cross supplies some canned meat, some powdered milk and a little butter. Three days before the big event, they started trading their rice for one meal a day to the other inmates of the prison, with the understanding that this rice would be paid back on March 17.

When the big day came, the boys gathered together their slender fare. Their fellow prisoners paid their debt in rice. The boys drained off their raisin wine, and with a full stomach for one day of their long imprisonment, they drank a toast to their Alma Mater on the other side of the world in the hills of Missouri. They sang "The Mining Engineer" and "St. Patrick was an Engineer." A good time was had by all.

Osher Goldsmith '20 Returning to Private Business

Osher Goldsmith, former chief of the regional petroleum unit of the Office of Price Administration, has resigned as of Nov. 9. He was chosen to head the unit when it was established April 27, 1942, the region consisting of Texas, Louisiana, Oklahoma, Arkansas, Missouri and Kansas. Goldsmith was a consulting petroleum engineer at Tyler, Tex., before setting up the regional unit with headquarters in the Dallas office of OPA. He expects to return to private business, but his address will remain 401 West Front street, Tyler, Tex.

Capt. William A. Ford '38 Returns from India

Capt. Wm. A. Ford has returned to the States after a lengthy period of service in India, building the Lido road. Bill's regiment was the first to start work on the Lido road and his company laid the first gravel on the road. Bill states that this piece of construction was really an engineering accomplishment as they had to cross the Pakai Hills where the country really "stood on end" and where the rainfall was so heavy that Bill claimed it was the only place he had ever been where the water ran up hill. They had from 120 to 206 inches of rain a year. Just for a change Bill spent one leave at a rest camp at Shillong, 30 miles away from Chirapunga, which is reported to be the wettest place in the world with a rainfall recorded of as much as 650 inches in a year.

Bill said they started the job with 10,000 natives but got up to as high as between 15,000 and 20,000 before the job was finished. Bill's company was a group of colored boys from the south who supervised the natives. Bill paid tribute to these colored boys saying one of them was worth ten of the natives. The colored boys handled the natives well. In trimming out the timber they would put four natives on a saw, two of them working ten minutes while the other two rested ten minutes.

Ira L. Wright '07 Still Ardent Miner

Ira L. Wright visited the campus on Oct. 11 being here in connection with some ore testing being done by the United States Bureau of Mines on ores from his properties. This is the third visit Mr. Wright has made to the campus since he graduated, the last one being during the time of the Chicago World's Fair.

Mr. Wright is Mine Operator and Manager of the Black Hawk Consolidated Mining Company at Silver City, New Mexico. While in school he was a charter member of both Tau Beta Pi and Pi Kappa Alpha fraternity. While here

he spent an evening with the students at the Pi Kappa Alpha house and there he quizzed the boys as to why it was so many of them were taking branches of engineering other than mining. The boys replied that they did not like the idea of working in the wet and dirty surroundings that a mining engineer works in. Mr. Wright stated that to him that was part of the thrill and attraction of mining. He did not want to spend his time sitting in an office and wearing a white collar. There is a certain stamina and interest in mining that he did not think attaches to any of the other lines of engineering.

Mr. Wright is active in his community of Silver City being at this time president of his Chamber of Commerce and also president of the Board of Regents of the State Teachers College which is located at Silver City.

**Lt. Col. R. O. Day '25 Writes****President Schneeberger from Marianas**

Dear Fred:

23 May 1945

The arrival of the spring issue of "MSM Alumnus" a couple of days ago reminded me that I have owed you a letter for many months. However, for me to owe letters is merely SOP with me.

Speaking of the "Alumnus" this issue is the largest I have seen. Incidentally, it is also the first one that I have felt that I really own. My dues paid for the ensuing year were the first I have paid since my graduation 20 years ago. Somehow until you and your present staff took hold and began to build, I felt that the Alumni Association amounted to next to nothing. True, I was one who did nothing toward improving it. Even now I don't propose to take any active part—things like that just aren't my line, but I can at least pay my dues and stand on the curb waving a banner. You are doing a grand job of needling and building and many hundreds of us are strongly behind.

Now that this Marianas area is no longer the front line—no air raids or similar excitement any more—we feel like old time garrison soldiers. Having been here from the start of land fighting that took the place, I've seen it develop into quite a place. I feel like an old settler. Now I am ready to move on and see something else. However, I readily admit that I have now no desire to arrive with the initial assault forces. Even though I didn't come on the beach until D4, I saw and smelled enough to last me for this war. D40 is more my speed now.

I had a very pleasant 30-day visit with my family in January and February. I left here on 13 January, flew to California, spent thirty days at home in Santa Barbara, then flew back to arrive 28 February. Met my son-in-law for the first time just a few hours before he had to leave for Port of Embarkation. He is in the Philippines. Kay Geve's baby was then just over two months of age. Cecelia and all the youngsters were well and seemed pretty glad to see Pop home. I'd been away nearly 35 months at the time I arrived back in Santa Barbara.

I see Mike Ledford is back in civilian life after having had his Engineer Petroleum Distributing Company in India.

I notice by the Alumnus that I am of the class of '29. Wish I was that much younger.

In the early days, and for several months thereafter there were several Alumni on this one island, all from classes a good many years after ours. Among them were Wattenbarger and Andresen both of about '41. Ellis of '39 and 3 or 4 others whose names have slipped me. I believe that all are now gone, the first two on to forward areas and Ellis back to the United States for reassignment. Oh yes, another was named Nesley and was around '40.

But enough of this—it's piling up and I've nothing but an entrenching shovel to dig me out. My very best to the lovely gal who refers to you as her husband and to the rest of the family. When time permits, let me have a line.

Lloyd N. Wood ex-'41 Decorated

Lloyd N. Wood is a Lt. (sg) in the Navy. Lloyd has been in the thick of the Pacific fighting. He has the air medal for meritorious service in the Aerial Flight in leading a division on 12 strikes against the enemy in the Carolines campaign. He has a second air medal for leading a division in flight in ten strikes on shipping and airfield in the Philippines campaign and sinking a cargo vessel. He has the navy cross for scoring a direct hit on an aircraft carrier and helping to sink this carrier during the second battle of the Philippine Sea. He received the Bronze Star for aid to the wounded in complete disregard for personal safety at the time when the Franklin was hit during its First Cruise. Lloyd is at Pearl Harbor and expects to return to the States discharged in the near future.

**Lt. (jg) David L. Forrester ex-'41
on Bismarck Sea when Sunk**

Word has been received from D. L. Forrester '11, the father of David L. Forrester that David was on the Bismarck Sea when it was sunk during the battle of Iwo Jima. David was in the water about two hours before being picked up by a destroyer escort. When the ship blew up he was in the water and was blown away from the ship but was not knocked out although his helmet was smashed and he had several wounds.

David was a Landing Signal Officer on the Bismarck Sea and had just finished landing some planes from the Saratoga which was under attack and badly damaged when his ship was struck by two Jap suicide planes.

David enlisted in the navy Dec. 23, 1941, was sent to San Diego, Calif., for boot camp training. After about three months, he was sent to Navy Pier, Chicago, Ill., for training; graduated as Aviation Metalsmith 2/c after about six months; then was sent to Pensacola, Fla., NAS, where he was servicing planes and making necessary repairs. After about six months of this, he was selected, with three other boys, to go to St. Mary's Pre-Flight training. He graduated from there and was sent to Corpus Christi, Tex., for further flight training, and received his wings. He chose Torpedo Bombing for further training and was sent to Ft. Lauderdale, Fla., where he graduated as a Torpedo Bomber Pilot and then was selected for Landing Signal Officer training; finished that and was assigned to an Air Group that eventually wound up on the Bismarck Sea. Having left for the South Pacific about Oct., 1944, he was in the battles of Mindoro, Lingawyen Gulf (Philippine Invasion) and Iwo Jima, where the ship was sunk. He saw the raising of the Flag on Mt. Surabachi Iwo Jima, from the deck of the ship that picked him up.

He is now Landing Signal Officer with Air Group 80.

Dr. J. C. Potter '29 Resigns as Deputy Solid Fuels Administrator

Dr. Charles J. Potter (B.S. Chem. E. '29, M.S. Chem. E. '30) has resigned as Deputy Solid Fuels Administrator, the position which he has held throughout the war period. Jack is returning to his home in Indiana, Pa., to devote his full time to his position as Assistant to the President of the Rochester & Pittsburgh Coal Co. He has also resigned as chairman of the Coal Committee of the Combined Production and Resources Board.

Commenting upon Jack's services in the Nov. 30, 1945 bulletin of the American Mining Congress, it was stated, "With 'Doc' Potter's departure from a strenuous wartime job, it is appropriate to record the coal industry's and the Nation's indebtedness to him for a major task well done. Carrying responsibilities for maximum coal production and for its proper distribution to war industries and to the civilian economy, Dr. Potter contributed not only his extraordinary understanding of the problems, but a prodigious capacity for work and an ability to secure cooperation from all concerned. He performed a service of the highest order which meant much to the successful prosecution of the war."

Howard M. Fowler '46 Writes Bulletin on Mining

An analysis of the method of powder blast mining in conjunction with long-hole blasting has been offered by Howard M. Fowler in a bulletin recently published by the Missouri School of Mines and Metallurgy. The several classes of the powder blast method are described and compared in detail and the applications of the various modifications of powder blast mining, as they may be used in conjunction with long-hole blasting, have been described. Since long hole blasting has resulted in lowered operating costs at several mines where the ore occurrences make it applicable, Mr. Fowler's discussion of the possible adaptations and limitations of the mining methods are particularly interesting and timely. The Bulletin grew out of a paper prepared by Fowler in connection with the Steinmesch Technical Writing Contest, funds for which were made available by J. H. Steinmesch '06, to encourage technical writing by students of MSM.

Many Veterans Returning to the Campus

With the demobilization of the army taking place scarcely a day passes that some of the MSM graduates who are veterans of the present war do not return to the campus—at times as many as a half dozen are on the campus in one day. Many of these boys are returning to their old jobs and some of the others, particularly those who graduated from 1942 on down, are interested in employment. The employment service has maintained a file on requests for men and has at present about sixty firms who have asked for engineers since V-J Day. Those boys who want employment have so far been given ample leads.

Account of those who have visited the campus is contained in the "Personals" under the class in which the visitor graduated.

MSM Grads Active in Amer. Society for Metals

Three graduates of MSM are chairmen or vice-chairmen of various chapters of the American Society for Metals. H. D. Sturges '40 is chairman of the Cincinnati chapter. Herbert is with the Wright Aeronautical Corp. His address is 945 Congress avenue, Glendale, Ohio.

Thomas E. Eagan '25 is chairman of the Mahoning Valley chapter. Tom is with the Cooper-Bessemer Corp. His home address is 515 Woodland avenue, Grove City, Pa.

Kenneth B. Bly '40 is vice-chairman of the Kansas City chapter. Ken is with the Aluminum Co. of America, living at 810 West 27th street, Independence, Mo.

Karl Hasselmann '25 Writes Technical Bulletin

A method of making surveys of inundated areas has recently been presented by Karl Hasselmann in a bulletin of the Missouri School of Mines and Metallurgy. Hasselmann has completely described in detail a method and apparatus whereby torsion balance geophysical surveys can be made over certain flooded land areas. The technique described, however, are not strictly limited to the use of the torsion balance but they also could be used either with the pendulum or gravimeter. As devices designed to test gravity conditions of the earth's crust require a high degree of stability to be operated satisfactorily, such surveys heretofore were not possible over water. The method and apparatus perfected by Mr. Hasselmann makes gravitative geophysical surveys possible and as a result several previously unprospected areas have been tested in considerable detail. Therefore, the main contribution of Hasselmann's technique is that it opens water covered areas to oil exploration with gravitational geophysical instruments, and this in turn, will result in fuller, more efficient determination of possible oil pool occurrences in such regions. Free distribution.

Carl Frederick Schwab Jr. '42

Credited with Two Jap Ships

Lt. (sg) Carl F. Schwab Jr. visited the campus with his wife on Oct. 1. Carl's discharge from the navy will become effective Oct. 25. Carl received his diploma on Friday in 1942 and the following Monday entered the navy. He has spent three and a half years in the service, 32 months of which were spent overseas. He wears 9 battle stars, one Distinguished Flying Cross and two Air Medals.

His first combat action was at Guadalcanal. He worked up through the South Pacific and on Nov. 11, 1944, while attached to the aircraft carrier Hornet, in an attack on a Jap convoy loading in Manila Bay, he was credited with planting a 1000 lb. bomb in a dive bombing attack amidship of a 7500 ton transport loaded with enemy troops which sank in five minutes.

Later, flying from the same ship, Carl was credited, in an action at Carnhryn Bay in the China Sea in another dive bomb attack, with planting another 1000 lb. bomb in a Jap oiler which sank in ten minutes following the attack.

Carl and his wife were enroute to his home at 2323 Quincy avenue, Kansas City, Mo.

Lt. (sg) Gale Bullman Returns to Rolla

Lt. (sg) Gale Bullman who has been serving as Welfare Officer for the navy throughout the Pacific area, has returned to Rolla on terminal leave after three years in military service. Gale was stationed in the States about 18 months and was then overseas for 15 months going first to the Naval Station at Hollandia, New Guinea, and then moving up to Leyte with the invasion of the Philippines at the Naval Advanced Base Unit 4, remaining there about 11 months. He went into Leyte with the original invasion group and saw much action in that vicinity. Gale is wearing two battle stars for the Leyte operation and the Philippine liberation ribbon with one star.

Gale was driving along the beach of Leyte in a jeep one morning when he noticed a familiar looking figure standing with a group of navy men. It was Chief Specialist Percy Gill, another former coach of MSM, who was in transit to an assignment on Okinawa when he was dumped off at the receiving station with no place to go. Gale took Perce to his own outfit and he remained for six or seven days until he was transported out. It was the first time Gale and Perce had met since Gale had entered military service. Perce is now on the Ajax, a tender for large air combat units.

Gale got back to the States on Oct. 22, arriving at Seattle, Wash. He is going to visit relatives and friends for awhile and resume his duties at MSM in the near future.

Three Oldest Living Graduates



L. R. GRABILL '78

The oldest living MSM graduate is Mr. L. R. Grabill. Mr. Grabill, in commenting on his experiences, wrote as follows:

"I entered the School of Mines in 1875—just 70 years ago. U. S. Grant was then president of the country which was just recovering from the Civil War. The Frisco railroad had been extended to Indian territory, thus opening Southwest Missouri to new growth.

"The town of Rolla used oil lamps to light its unpaved streets. There were no telephones, no water supply, and no sewers.

"The School was only four years old. The old Rolla building, first built for a public school, was the only one on the campus. The 'preparatory' department was mostly an academy for Rolla co-eds.

"The courses for the degrees of C.E. or M.E. were crowded into three years. There was no B.S. degree. No wonder that there were many casualties before the end of the course!

"The student body was small. The faculty was not large; but it was composed of men who were good teachers, with experience and interest in their work.

"In 1875, Dr. C. P. Williams (we called him Chemically Pure Williams, from his initials) was Director.

"The members of the first year class to which I belonged, were not well prepared as a rule. High schools had not then reached as far as they now do. Students from the larger cities, of whom there were a few, forged ahead of the pupils from smaller towns. Examples of this, at that time, were Ohman-Dumesnil '77, and Raold ex-'77; who later became famous as doctors of medicine.

"The students lived mostly in private homes, which had no plumbing or other modern conveniences. We studied at night by kerosene lamps, carried wood and made our own fires in the wood burning stoves, and took our baths from laundry tubs on our bedroom floors. In the laboratory we had no gas nor electricity. We used alcohol lamps for our laboratory work, and bought our own alcohol. Our laboratory hours were usually from 1 to 5 in the afternoons and all day on Saturdays. Military drill was required. We wore uniforms with blue coats and gray trousers, thus typifying the fact of a re-united nation. There were no radios, moving pictures, or similar diversions. We had little to do at night but study. Altogether we did make some progress, and some of us at last pulled through our finals and received our diplomas.

"A few weeks after graduation, I went to a near mining camp in Colorado, with an assaying outfit, and a surveyor's compass and chain; and set to work on my own. At first, it was a tough experience. Later, I became the assayer and surveyor for the Bassick mine, then a rich gold producer. Later still, I was engaged in the development of mining property in Colorado and New Mexico.

"In 1882 I became assistant engineer with the U.S. Engineer Corps, on river and harbor im-



W. R. PAINTER '82

The second oldest living graduate of MSM is Governor W. R. Painter of Carrollton, Mo., a man who graduated in engineering but made an outstanding success as a newspaper editor and in public service. Governor Painter was born at Carrollton, Mo., in Carroll County, on August 27, 1863. He was educated in public schools of Carrollton and was graduated from MSM in 1882 with the degree of Bachelor of Science in Civil Engineering.

After graduating from the School of Mines, Gov. Painter spent two years of mining in the Colorado district. In 1885 he was elected County Surveyor of Carroll County and in 1892 became editor of the Carrollton Democrat which position he holds to the present day. He has been active in governmental affairs in the State of Missouri for over fifty years. He was a member of the Board of Managers of the Missouri School for Deaf at Fulton from 1903 to 1909. He was a member of the Carrollton School Board for nine years. He has served as president of the Missouri Press Association, 1900-1901, and is the oldest of the living Past Presidents.

The country editor's influence soon manifested itself in Democratic politics and in 1912 he was elected Lieutenant Governor; hence, the title of "Governor" to which he has answered since. Gov. Painter was president of the Missouri Penal Institution Board from 1817 to 1921. In 1922 he was elected to the Senate and served two four-year terms. In the 52nd and 53rd General Assemblies he served as President pro tem of the Senate. In 1937 he was appointed a member of the Eleemosynary Board and in 1945 Governor Donnelly appointed him as Chairman of the Board, which position he now holds. State hospitals and institutions have always been one of his greatest interests. In his 83rd year of a busy and industrious life, "Governor" Painter, as he is familiarly known all over the state, is as vigorous as men 20 years younger. He is one of the first in the office in the morning and never misses an inspection trip to the State's institutions.

When asked if he has any hobbies, his reply is "Life has been my hobby and I have enjoyed it."

On January 12, 1888, Gov. Painter was married to Miss Cora Herndon of Carrollton. The Painters had four children, two of whom are living, Mrs. E. F. Salisbury of Kansas City and Mrs. Hudson Cooper of Carrollton. Mrs. Pain-

ter, too, was active in State affairs, holding the important position of Chairman of the Commission that decorated the State Capitol. She was also one of the national officers of the D.A.R. She passed away about three years ago.

Commenting upon his experiences at the School of Mines, Gov. Painter said: "Some 65 years ago when I entered the School of Mines and Metallurgy at Rolla there was only one building. We had a good corps of instructors and rather small classes. The educational work was splendid for that time and many of the students turned out to be excellent men in their choice of service, mining and civil engineering. It gives us older students great pride to return to the campus and see the improvement that has been made in the last 60 years. The School of Mines and Metallurgy at Rolla has developed into one of the greatest institutions of its kind in the United States and is turning out some very fine men for that special line of work."

"Since that time I have lived at my home in the suburbs of Washington."



W. M. CLAYPOOL '84

The third oldest living graduate of MSM is W. M. Claypool '84. Mr. Claypool has had a varied experience throughout the west, finally establishing his home and business at San Bernardino, Cal. In relating his experiences, Mr. Claypool said:

"After leaving MSM in 1884, I started working as assayer for the Pueblo Smelting & Refining Co. in Pueblo, Colo., later going to their ore sampling works in Deming, New Mexico in the same capacity.

"In 1886, I left Deming to work as assayer for the Grand Central Mfg. Co. in Tombstone, Ariz.

"My next venture was to form a little corporation and start a sampling works in Prescott, Arizona and after some years at this, went to the El Paso Smelting Works, El Paso, Texas, as assistant Metallurgist, and then to Rio Grande Smelting Works as General Purchasing Agent.

"Next, I took the field as an independent, securing contracts for ores purchased by me and leased the sampling plant in Prescott. I here had a commission from a wealthy syndicate to find a copper mine. In time, two newly found prospects were optioned by me, but my principals were too particular to take either of them. In a short time after my options expired, both of these, taken by others, quickly developed bonanza ore bodies and are now internationally known.

"After this discouragement, I decided to go it alone, forming a family business, putting my sons in as managers of a business in Needles, Cal., and one here. I kept on looking for that mythical mine, and there are few rat hole-prospects in the southwest not given the once over by me. But—no soap! The old time burro-pro prospector knows his business, even more so than the geologist and geophysicist. My hat is off to the old timer."

ter, too, was active in State affairs, holding the important position of Chairman of the Commission that decorated the State Capitol. She was also one of the national officers of the D.A.R. She passed away about three years ago.

Commenting upon his experiences at the School of Mines, Gov. Painter said: "Some 65 years ago when I entered the School of Mines and Metallurgy at Rolla there was only one building. We had a good corps of instructors and rather small classes. The educational work was splendid for that time and many of the students turned out to be excellent men in their choice of service, mining and civil engineering. It gives us older students great pride to return to the campus and see the improvement that has been made in the last 60 years. The School of Mines and Metallurgy at Rolla has developed into one of the greatest institutions of its kind in the United States and is turning out some very fine men for that special line of work."

Weddings

Sherald F. Heneghan '43 and Miss Marie Hansen, daughter of Mr. and Mrs. Anthony Hansen Sr., of Carrollton, Ill., were married on Jan. 3, 1946, at St. John's Catholic Church in Carrollton.

Sherald returned to the States on Dec. 10, 1945, after serving in Europe since Jan. 17, 1944. He was wearing five battle stars and the Bronze Star with Oak Leaf Cluster. Sherald landed on Omaha Beach on D-Day plus five and went through the battle of Normandy, Northern France, Central Europe, Ardennes and the Rhineland.

He and his new wife have not yet established a home but they hope to live in the vicinity of St. Louis. Sherald visited the campus on Dec. 20.

Robert Kick '44 and Virginia Mae McClure, daughter of Mr. and Mrs. Harold J. McClure of Dayton, Ohio, were married at the Shiloh Congregational Church in Dayton on Sept. 1. Mrs. Kick attended Bowling Green University and was a member of Tri-Lambda sorority there. Bob was a member of Lambda Chi Alpha fraternity, Blue Key, Rollamo Board, and American Society for Metals while on the campus. Bob and his bride visited the campus on Dec. 3.

Bob is employed by the Marine Division of General Motors; their home address is 2080 Auburn avenue, Dayton, Ohio.

Robert E. Balmat '42 and Miss Jeanne Louise Mertz, daughter of Mr. and Mrs. Ray Kline Mertz, of Allentown, Pa., were married in Allentown on Nov. 17, according to an announcement received by Prof. C. Y. Clayton.

Bob graduated from MSM in 1942 with the degree of Bachelor of Science in Metallurgical Engineering. He was a member of Sigma Nu fraternity on the campus. He is now employed by the Bethlehem Steel Corp. at Bethlehem, Pa. Bob and his bride will be at home after Dec. 1, at 430 Main street, Bethlehem, Pa.

Mr. and Mrs. Alfred L. Rossman have announced the marriage of their daughter Evelyn Alma to Lt. Cmdr. Harold Rueff, USNR, on Sunday, Nov. 4, 1945, at the Great Lakes Naval Base, Ill. Harold attended MSM from 1938 through 1940, going into the navy soon after leaving school. He was a member of Theta Tau fraternity and plans to return to MSM to complete work for his degree following his discharge.

Deaths

Robert L. Marston '20, Assistant General Superintendent of Production for the Sun Oil Company, died in Dallas, Tex., on Dec. 8, 1945.

Mr. Marston graduated from MSM in 1920 and has been prominent in the mid-continent oil fields for a number of years. He joined the Sun Oil Company staff shortly after World War I and was in charge of the Company's operation in Venezuela for 10 years.

On the campus he was a member of Pi Kappa Alpha fraternity, Theta Tau and the Satyrs.

Lt. Robert F. Miller '41 who has been missing since Oct. 30, 1942, has been declared dead according to word received recently by his wife. Lt. Miller went down in action over the Southwest Pacific while piloting a B-25. In an earlier battle he brought his plane in with 50 flak holes and received commendation for his heroic action.

Bob's wife, the former Emma Katherine Lane, resides with her parents, Mr. and Mrs. Fred Lane of Rolla. His parents live in Springfield, Mo.

Bob graduated in Electrical Engineering on May 28, 1941. He was a member of the ROTC Band, American Institute of Electrical Engineers, and Sigma Nu fraternity.

Mrs. O. L. Heuer, mother of Sgt. Robert L. Heuer ex-'45, has written that Robert was killed in action on Okinawa on April 20. He was with the 96th Infantry Division and had written to his parents on April 17 that he was returning to duty after recuperating from slight wounds.

Robert was awarded the Silver Star medal a few months before for gallantry in action in the Philippines. He went overseas in July 1944, and participated in the invasion of Leyte and was at the front lines for 24 days without rest during that campaign. In March he went to Okinawa with the invasion troops. He also held a Combat Infantryman Badge and the Purple Heart.

On the campus Robert was a member of Pi Kappa Alpha fraternity. Robert makes a total of 37 Miners who have given their lives or are listed as missing in action during the present war.

Mrs. Emil Froehly, mother of Robert E. Froehly ex-'46, has notified President Fred Schneeberger that her son lost his life on the USS Franklin on the date of March 19, 1945. Robert was listed as missing until Oct. 12, 1945, when he was officially declared dead by the Navy. He was Chief Radio Technician, having entered the service on Nov. 3, 1942.

Alumni Personals

1889

Euart C. Torrence received his mail at P.O. Box 46, St. Louis, Mo.

1894

W. S. Thomas gives his address as Hotel Jefferson, Macon, Mo.

1896

Francis N. Fynn ex-'96 is residing at 415 So. Third avenue, Maywood, Ill.

1899

Edwin T. Perkins who has been with the Bureau of Mines at Rolla for the past two years, has returned to his former home in Joplin. His address is 1723 Jackson avenue, Joplin, Mo.

1901

R. T. Rolufs is employed by the U.S. Bureau of Mines, Rolla, Mo. He is living at 102 W. 12th street, Rolla, Mo.

1904

Evan E. Price gives his address as Box 912, Helena, Montana.

1905

Clifford R. Wilfley after serving through the war with the U.S. Bureau of Mines, working out of their Denver office, has returned to his former business of Consulting Mining Engineer with offices in Denver. His home address is 2233 Grape street, Denver 7, Colo.

1908

George H. Boyer is living at 616 Lafayette Building, Fifth and Chestnut streets, Philadelphia 6, Pa. George is planning to attend the Graduate School of the University of Pennsylvania.

1909

Rowe McCrae visited the campus on Oct. 22. Rowe and his family are temporarily living at Cleveland avenue, Gainesville, Ga.

1910

Benton F. Murphy is mine superintendent with the Doe Run Lead Co., Rivermines, Mo.

1912

Walter B. Gray ex-'12 gives his home address as 938 Wisconsin avenue, Oak Park, Ill.

John R. Kenney lives at 427 W. Wrightwood, Chicago, Ill., and is a consulting engineer at 2132 N. Halsted street, Chicago, Ill.

Roswell H. Maveety is living at 53 W. Jackson boulevard, Chicago, Ill.

O. C. Wemhaner is engineer with the D. F. and H. Mining Co., California, Mo. He says he made a trip to Minnesota and had a mighty enjoyable visit with one of the most popular men old MSM ever turned out, E. P. (Red) Barrett '09.

E. D. Lynton visited Rolla on Nov. 9. Eddie was enroute home from a trip through Texas

and Louisiana for his company, the Standard Oil Co. He reported that he had a fine time at Houston at the Houston meeting of the Alumni Association and he saw a lot of fellows there and Karl Hasselmann was certainly a good host. Eddie was sorry to have to miss the alumni meeting on Nov. 9 and also the Homecoming in Rolla on Nov. 10, but previous engagements in Denver kept him from attending both. His home address is 1221 No. Isabel, Glendale, Cal.

1913

E. C. McFadden ex-'13 is now district manager for the Pittsburgh Pipe Cleaner Co. of Chicago and is living at 10535 So. Wood street in Chicago.

S. E. Hollister has been appointed manager of the Southwestern Engineering Co. of the Philippine Islands with headquarters at 203 Ayala Bldg., Manila, and will leave for his new assignment in the near future. Prior to the war with Japan, Southwestern was actively engaged in mining and metallurgical engineering and construction work in the islands, and will continue in this work as well as undertaking engineering and appraisal in connection with war damage claims in that area.

1914

L. L. Lodwick is now living at 439 N. Main, Columbiana, Ohio.

1916

Clyde W. Bower ex-'16 is living at 1830 W. Lawrence, Chicago, Ill.

Walter Gammeter lives at 5501 N. Kent St., Whitefish Bay, Milwaukee, Wis.

H. A. Neudstaedter visited the campus on Oct. 8, accompanied by his son, Robert, who is in naval service. Mr. Neudstaedter is with the St. Louis Smelting & Refining Co., his home address being 5635 Eichelberger avenue, St. Louis, Missouri.

Carl G. Stifel who is president of the Pochantas Mining Co. and the C. G. Stifel Realty Co. has office at 415 N. 8th St., St. Louis 1, Mo.

John J. Doyle ex-'16 is in the oil business for himself and is a successful operator in the Louisiana field. Jack will be remembered by many as St. Pat of 1915. His home address is Box 844, Lake Charles, La.

1919

Walter F. Lottmann is living at 3507 Greer avenue, St. Louis 7, Mo.

V. X. Smiley visited the campus on Oct. 4. He is a construction engineer with the Ill. Div. Highways. His address is Box 365, Dixon, Ill.

Philip H. Bohart is with the Gulf Oil Corp. at Tulsa; he has taken over as director of the production division of the Petroleum Administration for War. As assistant to the vice-president of Gulf he supervised drilling, production, warehouse, and purchasing.

1920

Carl A. Gettler is living at 607 Westborough place, Webster Groves 19, Mo.

Ronald O. Swayze is assistant manager of the Rocky Mountain district for the General Petroleum Co., 415 Cons. Royalty Bldg., Casper, Wyo.

1921

William McKinley Kahlbaum has moved from Watervliet, N.Y. to 406 N. Road street, Elizabeth City, N.C.

A. D. Hahn has resigned as professor of mining at the New Mexico School of Mines and has now opened up a silver mine. His address is Crested Butte, Colo.

1922

Philip Andrews is Chief of Exploration for Socony-Vacuum in Colombia, his address being Socony-Vacuum Oil Company of Colombia, Apartado Aereo 4034, Apartado Nacional 1140, Bogota, Colombia.

John L. Bulger gives his address as S.E.E.A., Viloco via Eucaliptus, Bolivia, S.A.

B. E. Charles is addressed at present at the Hotel Owyhee, Boise, Idaho. For many years he was engaged in mining interests in Arizona and Mexico.

Glenn J. Christner is employed by the Eagle Picher Co., 420 Lexington avenue, New York. Ben M. Layton is residing at 625 Forest St., Ferguson 21, Mo.

Lt. Col. Edwin G. Machin visited the campus on Sept. 20. Ed has just returned from 38 months overseas where he was engaged in construction work in southern England and on the rehabilitation of the railways through France and Germany up into Austria. One of his outstanding accomplishments was the construction of a 2,800 railway bridge across the Rhine river in six days and fifteen hours.

George Richert is the Assistant Minerals Attache for the U.S. in Mexico City.

1923

Wilbur J. Darby is with the Tennessee Valley Authority at Florence, Ala.

M. L. Frey, former chief metallurgist of the aircraft engine division of Packard Motor Car Co., is now connected with the Allis-Chalmers Mfg. Co. for whom he is assistant to the general works manager of the tractor division, or, more simply, staff metallurgical engineer. His home address is 6419 W. Wisconsin avenue, Wauwatosa 13, Wis.

Lt. Col. S. Pence is a Provost Marshal at the Tenth Corps Headquarters. Lt. Col. Pence recently was awarded the Bronze Star Medal for "Meritorious Achievement in connection with military operations against the enemy" on Mindanao. He was stationed in Sherman, Tex., with Tenth Corps in 1943 and before that was assigned to the U. S. Engineers' Office at Denison, Tex. He has been overseas 13 months with Tenth Corps, stationed first in New Guinea and

then taking part in the Leyte and Mindanao campaigns to free the Philippines.

John H. Riddle vocate '23, is president of the Riddle Quarries, Inc., at Marion, Kan. John writes that he keeps up with the affairs of the school through the newspapers and is still interested in the progress of the institution.

Ambrose C. Rucker is living at 4247 S. Benton, Kansas City 4, Mo. He is engineer with the Panhandle Eastern Pipeline Co., 1223 Baltimore, Kansas City.

Charles C. Tevis has moved from Kirkwood, Mo., and is now living at 1604a Jefferson Hts., Jefferson City, Mo.

Capt. Virgil Whitworth has now been discharged from the army and is now temporarily with his sister at Sandusky route, Montrose, Ia.

1924

John L. Andrews, formerly of Elmwood Park, Ill., is now receiving mail at Fairfield, Ill.

1925

J. E. Couch is employed by the Bridgeport Oil Company, Box 765 Great Bend, Kan. He is living at 3319 Forest, Great Bend.

George D. Gaines whose home address is 5500 Michigan avenue, Kansas City, Mo., is employed in Los Angeles, Cal., at the present time.

Charles C. Irving gives his present address as Wauconda, Ill.

Lt. Col. R. D. Hodge writes from Tokyo, Japan, that he is heading for home and civilian life. His home address is 18 Collins avenue, Troy, N.Y. He is returning to his old job with the International General Electric Company in Schenectady.

E. M. Lindenau has resigned as senior mining engineer with the U.S. Bureau of Mines in Salt Lake City, Utah, where he was doing exploration work for strategic minerals and mining research in connection therewith. He is establishing an office in Tucson, Arizona as a consultant.

Hollis E. McBride, former resident of Cape Girardeau, Mo., is now living at Batesville, Ark.

Stuart M. Rathbone is now living at 1812 Sherman avenue, Evanston, Ill.

Leo E. Shire has been transferred from the Engineering Department to the Export Sales Division of Beech Aircraft Corporation, Wichita 1, Kan. Leo is now living at 5119 E. English, Wichita 8, Kan.

Lt. Col. Roger O. Day has returned to the States after 43 months of overseas duty in the war. Rod is on terminal leave now and will be discharged from the army on Feb. 22. He has had five years of military service. Rod is taking a vacation trip through California and expects to return to his old job the latter part of November stopping off in St. Louis to visit the president, Fred Schneeberger. Rod's son-in-law, Capt. Geo. H. Davis, now in the Philippines, contemplates enrollment in the School of Mines and Metallurgy in January.

Ronald D. Ward is with the Shell Oil Co., Refinery, Construction Dept., Houston, Tex.

Capt. Ronald M. White was in Rolla Nov. 29. Ron has been overseas for 15 months and is wearing three battle stars and the Bronze Star along with the Philippine Liberation ribbon with one bronze star. He followed the war from New Guinea to the Philippines and then to Japan, ending in Yokohama with the 8th Army Headquarters, Engineer Section. Ron is expecting his discharge in early February.

Capt. Leonard O. Williams is returning to Cheyenne, Wyo., as State Sanitary Engineer from which he was on leave.

1926

C. A. Anderson is chief engineer with the Parkersburg Rig and Reel Co., in Coffeyville, Kansas.

Lt. Samuel E. Craig is in the 1399th Engr. Const. Bn., APO 957, c/o PM, San Francisco, Cal. He is now stationed in the Hawaiian Islands. His family is living in Salt Lake City, Utah.

Erwin Gammeter gives his new address as 1637 S. 16th street, Maywood, Ill.

Howard A. Herder ex-'26 gives his address as 375 Argyle avenue, Elmhurst, Ill. He is fuel engineer for the Sahara Coal Company, 59 E. Van Buren street, Chicago, Ill.

Lt. Col. R. D. Hodge is with the 526th Quartermaster Group, APO 503, c/o PM, San Francisco, Cal. Dryden wrote recently giving this

change of address.

Lt. Col. Daniel Kennedy visited Rolla on a 19-day leave in early September. Dan returned to the States on Aug. 22, on the Queen Mary, and left Rolla on Sept. 12, to return to duty in Washington, D.C., where he will be connected with the army mapping service of the Corps of Engineers. Dan was overseas for 17 months with the 3rd Army under Gen. Geo. S. Patton and has five battle stars, the Bronze Star and the Legion of Merit. He also wears the Purple Heart with cluster from the last war.

Charles L. Kitchen ex-'26 is general foreman of the Blast Furnace Dept., with the Wisconsin Steel Works of Chicago, Ill., and is living at 7015 S. Michigan in Chicago.

1927

Herman Blickensderfer is now located at 918 E. 6th street, Gary, Ind.

Edward H. Cook is now with the Naz-Dor Corp., 469 Milwaukee avenue, Chicago, Ill.

Edward R. Cushing is with the Celotex Corp., 120 S. LaSalle street, Chicago 3, Ill. His home address is 909 Elmwood avenue, Evanston, Ill.

Capt. James W. Hardy is stationed in Maryland. His address is Hq. 3rd SCU, Ft. George G. Meade, Md.

Ralph H. Knight has been installed as President of the Sales Managers Bureau of the Chamber of Commerce in St. Louis. Ralph is District Sales Manager for the Air Reduction Sales Co. in St. Louis.

John E. McCauley is residing at 7725 South Lowe avenue, Chicago, Ill. He is with Sloan & Cook, consulting engineers, at Chicago, Ill.

Robert F. McCaw and Mrs. McCaw of 1608 Sherwin, Chicago, Ill., announce the birth of a son, Dec. 14, at the Evanston Hospital, Evanston, Ill. Mr. and Mrs. McCaw have one other child, a daughter, Susan.

Lt. Amedee A. Peugnet, U.S. Navy, visited the campus on Dec. 7. He is on terminal leave and his mailing address is 4482 Lindell Blvd., St. Louis, Mo.

R. H. Wightman is mine superintendent of the Riverside Cement Company, Riverside, Cal.

1928

Herbert E. Ahrens lives at 2921 Dundee Rd., Louisville, Ky.

Lt. Col. Chas. W. Ambler Jr. gives his military as Officer Register-Officers Section, Camp Claiborne, La. His home address is 5915 Washington Blvd., St. Louis 12, Mo.

Clete Cordry visited the campus on Sept. 28. Clete is with the Gulf Oil Co., stationed at Fort Worth, Tex.

At the Mining Club in New York City recently, several MSM men were seen. Col. T. C. Gerber was there, and he is to soon retire from the Army after twenty-eight years' service in the Army. Also there were Rowe F. McCrae '09 and G. E. Johnson '16.

Wm. B. Machin is a captain in the army stationed at Camp Claiborne, La. His home address is 2104 Minor street, Fort Wayne, Ind.

1929

B. R. Coil gives his address as Box 100, Miami, Ariz.

T. O. English is with the Aluminum Co. of America, Pittsburgh, Pa. Tom writes that he is applying for his registration as a licensed engineer with the Pennsylvania State Registration Board.

Maj. John H. Hahn gives his military address as HQ, KURE Base, APO 994, c/o PM, San Francisco, Cal.

Maj. H. G. Jones is overseas and gives his present address as HQ IX Engr. Comd., APO 126, c/o PM, New York, N.Y. He will return to the United States shortly and after Jan. 15, mail will reach him at his home address which is 110 Osborne street, Owosso, Mich.

James O. Lettys is living at Unit 249 B, Garden Spring, Spokane, Wash.

George T. McCrorey was on the campus on Oct. 10. George is engineer with the St. Joseph Lead Company at Rivermines, Mo. His home address is in Eldon, Mo.

Henry D. Monsch has moved from New Kensington, Pa., to Knoxville, Tenn. His street address is 5507 Lake Shore drive.

Maj. Luther U. Murray is now stationed in Washington, D.C. with the Headquarters Army Air Force, Air Installation Div. This division is

responsible for the construction and maintenance of Air Force installations in continental United States. Residence, 1201 N. Pitt street, Alexandria, Va.

Tom W. Rubottom has moved from Fairhope, Ala., and can be reached c/o Westinghouse Electric and Mfg. Co., 411 North Seventh street, St. Louis, Mo.

Mercer V. Thompson visited the campus on Sept. 17. Mercer is going to the northwest with the U.S. Geological Survey as a topographic engineer.

1930

Thomas J. Dover Jr. lives at 6811 Schneider avenue, Hammond, Ind., and is now supervising engineer, Defense Plant Corp., 111 W. Jackson, Chicago, Ill.

Lloyd R. Lacy, supervisor of the crude analysis division of the Phillips Petroleum Co., at Bartlesville, Okla., has gone to Shreveport, La., as division engineer for the company.

R. S. Martin has just been released from active duty with the Army under date of Oct. 8, 1945 and is awaiting the end of terminal leave to return to work as a civilian with U.S. Engineers. He writes that the Alumnus is appreciated. His home address is 211 New York avenue, Providence, R.I.

Percy Elliott Moore gives as his new address 827 New Federal Bldg., St. Louis, Mo.

Edward T. Regehardt is a lieutenant in the USNR overseas but expects to be discharged soon and will be home at 224 N. Park, Cape Girardeau, Mo.

Booker H. Rucker and Mrs. Rucker are the proud parents of twin boys born to them on Sept. 5, 1945. The boys have been named William Hall and John Overton. Booker and his family now reside at W. A. street, Joplin, Mo.

1931

Lt. Comdr. Ben R. Elliott gives his home address as 12 East North street, Shawnee, Okla.

Prof. Ernest R. Epperson is in the chemical engineering department, Michigan College of Mining and Technology, Houghton, Mich. His home address is 207 Blanche street, Houghton.

Wesley I. Hartnagel is living at 3640 Childress avenue, St. Louis 9, Mo.

Lt. Col. E. W. Heilig is in command of the 341st Engineer Regt. (GS), APO 350, c/o PM, New York, N.Y.

Andrew L. Pertierra resides at 5029a Bancroft avenue, St. Louis 9, Mo.

Peter J. Picco gives his home address as 7310 Ethel avenue, Richmond Heights 17, Mo.

Joseph E. Scally has returned to his home at 4055 Humphrey street, St. Louis 16, Mo.

James E. Stokes is living at 1391 S. Clayton, Denver 10, Colo.

Lt. W. R. Towse has been with the Navy Salvage Unit operating in the European theater. His main duties were the clearing of harbors of France, Italy and England, of ships that had been sunk. Bill's address is 706 Jackson street, Macon, Mo.

Walter J. Ware has moved from 309 E. 70th, Kansas City, to 8540 Grant street, Overland Park, Kan.

Loren A. Wilson receives his mail at Box 266, Crane, Mo.

Prof. R. Z. Williams and Mrs. Williams are the parents of a new son Mark Hinton, born Nov. 8, 1945.

1932

O. M. Andres is in the Navy Dept., Material Redistribution & Disposal Office, 1865 Railway Exchange Bldg., St. Louis 1, Mo. His home address is Smithton road, Belleville, Ill.

Isaac W. Friedman lives at Worcester, Mass., where he is general superintendent of Massachusetts Smelters, Inc.

Capt. W. A. Gallemore, whose present military address is Sq. A, 1325th AAF Base Unit, APO 433, c/o PM, New York, N.Y., advises that his home address is 701 Crescent street, Rogers, Ark.

Albert W. Happy is planning to enroll in the graduate school of the University of Michigan to obtain a Master of Science degree in Sanitary or Public Health Engineering. Albert lives at 319 Washington street, Jefferson City, Mo.

J. B. Hinchman is with the Construction Division of the Monsanto Chemical Co. at Nitro, W.Va.

Ret. Horn is living at 3705 Seneca, St. Joseph, Mo.

Vernon L. Klesath is a captain in the U. S. Army Engineers stationed overseas. His home address is 106 S. Pine, Rolla, Mo.

Maj. Ormond K. Lay is now at the Fort Worth Q.M. Depot, Fort Worth 1, Tex. His home address is 4513 S. Grand, St. Louis 11, Mo.

Capt. Steven M. Malloy has been discharged from the navy and has returned to his work with the U.S. Bureau of Mines in Rolla. His home address is 620 Main street, Joplin, Mo.

Homer Thompson has been discharged from military service with the rank of Captain. He has resumed his position with Russell & Axton, consulting engineers, in St. Louis. His family is still living at 1605 North Elm street, Rolla.

Dutch Tittel is employed by the Owens-Illinois Glass Company in Alton, Ill.

1933

A. W. Beinlich was on the campus Oct. 16. Alfred is with the Tennessee Valley Authority as ceramic and chemical engineer, living at 109 Village 2, Sheffield, Ala.

Hymen Bierman is now located at 8120 So. Crandon avenue, Chicago. He is a chemist with the J. C. Seeburg Corp. of Chicago.

Walter H. Braun gives his address as 2 W. Highfield road, Baltimore 18, Md.

Maj. Warwick L. Doll is on terminal leave from military service and is living at 605 West 14th street, Rolla, Mo.

E. W. Gieseke is living at 54 Richmond Dr., Old Greenwich, Ia.

Capt. and Mrs. Harry Hedges and their daughter are spending their vacation in Rolla with Mrs. Hedges' parents, Dr. and Mrs. J. E. Smith.

Alfred H. Hesse is Chief Research Metallurgist for the R. Lavin & Sons, Inc., at 3426 So. Kedzie Ave., Chicago 23, Ill. Al is living temporarily c/o Mrs. John Hale, 125 So. Stone Ave., La Grange, Ill., and about Feb. 1, he expects to move his family from St. Louis to their new home at 604 So. Tenth Ave., La Grange, Ill.

A. R. Helmkamp is living at No. 3 Heiken court, Yuba City, Cal.

Theodore B. Kaczmarek is now living at 11656 Lowe avenue, Chicago 28, Ill.

Frank C. Kohlmetz is now living at 4601 Springfield street, Dayton 13, Ohio.

Mrs. Ralph Koewing, the former Mary Lee Johnson is living at 1402 N. Holyoke, Wichita 6, Kan.

Charles H. Lambur visited the campus on Sept. 28. Charlie expects to be discharged soon after being overseas for 33 months. He first went into England in July, 1942, and then into north of Africa as a staff engineer of the 12th Air Force. After North Africa he went into Pantalleria where he was chief engineer for all the air force and from there he went to the island of Sicily as chief engineer for the 3rd Air Force Command. He then went into Italy where he served as chief engineer for the 12th Air Force Service Command up until the time of his return to the States. He had charge of engineering activities for Corsica, Sardinia, Southern France and Italy for the 12th Air Force Service Command, returning to America in March, 1945. Charlie was enroute to Jefferson Barracks for discharge under the officers point system, with a total of 128 points. He will resume his position with the editorial staff of the McGraw-Hill Publishing Co. on Nov. 1, working as consulting mining engineer and editorial writer for Coal Aid.

In Rolla, Charlie was introducing his principal souvenir of the campaign. In Algiers he met Miss Jeanine Mosca, of Nice, France, and they were married in the St. Charles Church on April 8, 1944.

Clarence W. Lamers gives his address as 5514 Chippewa street, St. Louis 9, Mo.

Paul B. Prough visited the campus on Nov. 13. He received his discharge recently from the Navy and gives his home address as 1508 Andrew drive, Kirkwood, Mo.

John S. Putnam is living at 301 E. Faunce lane, Oakridge, Tenn.

T. O. Seiberling has been discharged from military service where he held the rank of Major and has returned to his position with the St. Joseph Lead Company at Bonne Terre, Mo. Ted

is living at 402 Huff Court, Bonne Terre.

Prof. G. Perry Steen visited the campus on Oct. 4. Perry is assistant professor of civil engineering at the University of New Mexico, Albuquerque, N.W. His home address is 602 North Dartmouth.

Jack M. Willhite has moved to 4924 N. Illinois street, Indianapolis, Ind.

Herbert E. Thilenius has moved to 507 Endree street, Richland, Wash.

Maj. Arthur J. Williams is now with the Hq. Chanor Base Sect., Engr. Sect. APO 562, New York, N.Y. His home address is 2320 Cleveland boulevard, Granite City, Ill.

1934

Maj. Peter G. Cei is now in the Kennedy General Hospital, Ward 17A West, Memphis, Tenn. His home address is R.R. 3, Box 264, North Little Rock, Ark.

Henry B. Coons is now living at 120 Observatory drive, St. Albans 9, West Va.

Oscar M. Duncan received his mail c/o Industrial Farm Bureau, Mt. Vernon, Ind.

W. B. Fletcher lives at 2117 N. street, Bedford, Ind. He is employed by the Engine Ingalls Stay Co.

Herbert A. Hoffman, formerly of Elgin, Ill., is now residing at 116 St. Joseph street, Bonne Terre, Mo.

R. G. Hudson has moved from Fairhaven, Mass., to 156 Edgewood drive, Stow, Ohio.

Charles E. Kew is assistant general superintendent of the South Buffalo Railway Co., 2558 Hamburg Turnpike, Lackawanna 18, New York. Charlie writes, "I am extremely pleased to see that the alumnus magazine is blossoming out as it is today as I personally feel that an interested alumni is the best advertisement the school can have."

Lt. Col. LeCompte Joslin is with the 1635th Engineer Construction Bn., on the island of Ie Shima. This battalion was recently commended for outstanding service rendered in development of the island as an advanced air base. The citation stated: "Although handicapped by enemy air attacks, the personnel of the 1635 Engineer Bn. conducted themselves in an exceptionally meritorious manner and successfully met all construction schedules. Their services reflect the highest standards of the military service."

Edward C. Kozeny is living at 6212 Odell St., St. Louis 9, Mo.

Richard A. Parker who is with the General Chemical Company, has been transferred to their Wilmington office, Wilmington Turnpike, Marcus Hook, Pa.

William Power is now living at 1118 E. 82nd street, Chicago, and is chief chemist for the Cities Service Oil Company at East Chicago, Indiana.

Charles C. Segall is employed by the Midwest Pipe Co., and is living at 1373a Clara Ave., St. Louis 12, Mo.

Robert Sackewilt is with the U.S. Engineers, 103 E. 17th street, Kansas City, Mo.

Richard E. Taylor resides at 415 N. New St., Bethlehem, Pa.

Maj. John H. Zell is in the Air Technical Service Command, AAF, SCU 1180 MIT, Cambridge 39, Mass. His home is 7038 Pernod Ave., St. Louis, Mo.

1935

Marvin H. Breuer gives his home address as 1606 Pine street, Rolla, Mo.

Capt. R. H. Buck is in the Philippine Islands on military duty. His wife and family are living at 16 Great Oaks, Rolla, Mo.

Glenn L. DeRoy is with the Army Service Forces, Edgewood Ordnance Assembly Plant, Edgewood Arsenal, Md.

Louis W. Holtman is employed by the Shell Oil Co., and is living at 123 8th street, Woodriver, Ill.

David Howerton and his wife visited his mother in Rolla in Sept. Dave is with Western Electric in Chicago. His home address is 144 North Delaplaine, Riverside, Ill.

William W. Kay has moved from Indiana, Pa., to Ashland, Pa. He is living at 822 Center street.

Maj. R. J. Knoll writes from Okinawa. His address is now 174 Engineer Construction Battalion, APO 901, c/o PM, San Francisco, Cal.

Rudy writes, "I have just received my copy

of the April-May '45 issue of the Alumni magazine. Am always glad to learn of the latest school activities and also the whereabouts of my classroom buddies. However, I was disappointed to see only three of the class of '35 listed. Certainly hope the others have not forgotten our Alma Mater.

"Have been on Okinawa from invasion day on. The work has been varied but interesting, most of it being road and garrison construction.

"Hoping to return soon and partake more actively in MSM Alumni work, I remain."

Cpl. Harry **Komm** is with the 75th AAF BU, Hq. AACS, Asheville, N.C.

W. H. **Thias** is now living in Affton, Mo., at 931 Affton place.

Lt. Arthur R. **Towse** is now located on the Burma road near Kunning, China. Roy's address is Sub Hqs. SOS, APO 488, c/o PM, New York, N.Y.

Morris W. **Turken** has a change of address. His new residence is 7235 Tulane avenue, St. Louis 5, Mo.

1936

Andrew T. **Aylward** is with the St. Louis Police Dept., 12th and Clark, St. Louis, Mo., and is living at 5959 Alpha avenue.

Capt. Edward C. **Fiss** is with the 13th Engr. Bn., U.S. Army, APO No. 7, c/o PM, San Francisco, Cal.

Frank **Haines**, formerly with the Materiel Bureau of the Mo. State Highway Dept. has been released from army service and contemplates returning to his work with the Mo. State Highway in the near future. His address is 5 Great Oaks, Rolla, Mo.

Lt. (jg) Richard H. **Hoffman** receives his mail at P.O. Box 667, Sweetwater, Tex.

Lt. James H. **Menefee** is with the Headquarters of the Ninth Air Force, APO 696, c/o PM, New York, N.Y.

Fred A. **Schwab** visited the campus on Sept. 8. Fred is with the U.S. Engineers in Kansas City. His home address is 419 Jackson, Kansas City, Mo.

M. R. **Spahr** is living at 3004 Reba, Houston, Texas.

Leslie G. **Tennies** is a major stationed at McCloskey General Hospital, Temple, Tex. His home address is 202 Fourth street, Little Valley, N.Y.

William E. **Walker Jr.** resides at 525 Arlington place, Chicago, Ill.

Mrs. Charles D. **Wright** of Webster Groves, Mo., mother of Joseph Wesley **Wright**, has presented to the Episcopal Church of Rolla, a memorial flag in memory of her deceased son. The flag was dedicated at a special memorial service for the Sigma Nu fraternity of which Joseph was a member and a special ceremony by Rev. O. V. Jackson, pastor of the Episcopal Church in Rolla. For many years the Sigma Nu fraternity has attended the Episcopal Church in a body for their annual memorial day services.

1937

Frank C. **Appleyard** gives his home address as Glenview, Ill. He is with the U.S. Gypsum Company at Chicago, as assistant to the production manager.

Alfred F. **Bochenek** is now on the American Society of Mechanical Engineers' staff, 20 West 39th street, New York 18. His residence and address for mail is 879 Springfield avenue, Summit, N.J.

Ross R. **Carrolla** is Office Engineer with the Raymond Concrete Pile Co. in Liberia, Africa. His mailing address is: Civilian Employee, Raymond Concrete Pile Co., APO 605, c/o Postmaster, Miami, Fla.

Maj. Wm. W. **Culbertson** visited the campus Dec. 7. He is on terminal leave and can be reached at 509 E. 5th street, Rolla, Mo.

W. L. **Donnelly** is superintendent of the Linde Air Products-Corundum Plant, Columbus drive and Kennedy, East Chicago, Ind. He is living at 6734 Wicker avenue, Hammond, Ind.

Lt. (sg) R. L. **Elgin** visited the campus Oct. 3. Bob has recently received his discharge and was enroute to his home at Platte City, Mo., for a visit with his mother. Bob is now the father of a boy, Robert Meade, born July 14, 1944. He was married Oct. 15, 1941 to Caroline Corley in Oklahoma City.

Arthur L. **McClanahan** is living at 188 May-

ville avenue, Kenmore, N.Y. He is employed by the Airplane Division of Curtiss-Wright Corp.

Lt. Wilfred K. **Rodman** is in Calcutta, India. Mrs. Rodman is at her home in St. James, Mo.

Grant W. **Schaumburg** and family spent their vacation in Rolla with Mrs. Schaumburg's mother, Mrs. Florence Miller. They are living at 319 Harvard Circle, American Forks, Utah.

Kenneth F. **Sheckler** writes that he was pleased and surprised to receive the August-September issue of the MSM Alumnus as it is the first issue he has received in about four years as "... a rolling stone gathers no moss and very little mail." Kenneth flew from California to Manila and enjoyed the flight very much. Manila is very much destroyed but is coming back to life again. At the present time he is assigned to the Construction Corps of the Philippines (Concor). Ken writes that he hopes to receive his release shortly after the first of the year as four years of army routine is enough for him. We saw Col. Itschner, formerly PMS&T at Leyte; and also saw Bill Neel '35 in the Philippines. Kenneth plans to return to the A. P. Green Fire Brick Company at Mexico, Mo. in their Sales Department upon discharge.

1938

Eddy **Ballman** has returned to his employment with the Shell Oil Company at Wood River, Ill.

Lt. Don C. **Bowman Jr.** was decorated with the Bronze Star and Commendation Ribbon for services as a diving officer aboard a submarine in the Pacific at a recent ceremony at Lambert Field Naval Air Station. Don has also received the Silver Star, Navy and Marine Corps medal and two presidential unit citations. Don received his discharge on Dec. 1. His home address is 5601 Giles avenue, St. Louis.

Lt. Roy C. **Cornett** is with the 26th General Staff Class, 450-7 Kearney, Ft. Leavenworth, Kansas.

William W. **Decker** has accepted a position with Horner and Wyatt, consulting engineers of Kansas City, Mo. His home address is No. 5 Green Acres, Rolla, Mo.

C. C. **Van Deventer** is with the Caribbean Petroleum Co., Maracaibo, Venezuela, S.A. Van writes that he finds the Alumnus very interesting.

Joseph W. **Howerton** is at the home of his mother at 704 Main street, Rolla, Mo., recuperating from an illness. Joe is with the Western Electric Company, Hawthorne Station, Chicago 23, Ill.

Maj. Eugene B. **Lanier** is in the 3233rd Engr. Service Bn., APO 513, c/o PM, New York.

Jesse S. **LeGrand** resides at 16 Lloyd court, Nutley, N.J.

John R. **McClosky** has moved to 304 E. 13th street, Baxter Springs, Kan.

Maj. Belding H. **McCurdy** receives his mail at McNair Hall, Box 189, Ft. Sill, Okla.

Roy W. **Matthews** is living at 310 San Benite Way, San Francisco 16, Cal.

Howard **Mollett** is now employed in the Research Dept., Seagrams Co., Louisville, Ky.

Lt. Joe E. **Peters** is on terminal leave from the Navy and is living at the home of his wife in Dixon, Mo. Joe has been overseas for about two years.

Lt. Richard D. **Prough** visited the campus on Nov. 13. Richard is still in the U.S. Naval Reserve, PIC, Navy Yard, Washington, D.C., but expects to be discharged soon. His permanent address is c/o Mrs. Wm. J. Finlay, 1607 Dearborn drive, Kirkwood, Mo.

John C. **Radcliffe** is sales engineer with Westinghouse Electric Company in St. Louis. His home address is 337 W. Madison, Kirkwood 22, Mo.

Capt. Ralph L. **Scarborough** visited the campus on Oct. 25. Ralph is with the Corps of Engineers. His home address is Route 3, Box 486, Springfield, Mo.

Kenneth V. **Sibert** was discharged from the army on Nov. 1, after three years of service. Kenneth wears four battle stars. He is at home now at 42 Rolla Gardens, Rolla, Mo.

Wm. E. **Stephens** is plant engineer with the U.S. Gypsum Co. at Heath, Mont.

Maj. Frederick W. **Thompson** is spending his terminal leave in Rolla visiting his parents and friends. Fred has just been discharged after

four years of service, nine months of which were overseas with Gen. Patton's Third Army, joining the army in France and continuing with it until the collapse of Germany. Fred is wearing three battle stars representing the battle of the Ardennes, Rhineland and Central Europe. He also wears the Purple Heart and the Bronze Star. His home address is P.D. Box 219, Rolla, Missouri.

1939

James W. **Aittama** has moved from 226 to 378½ Algoma Blvd., Oshkosh, Wis.

Maj. Herbert F. **Creelius** is now at Headquarters, Army Ground Forces, Washington, D.C.

Lt. (jg) Glenn E. **Brand** is in the Navy Hospital B-11, Camp White, Medford, Oregon. His home is in Steelville, Mo.

Elmond L. **Claridge** visited the campus on Sept. 20. Elmond is with the Woodriver Refinery of the Shell Oil Co., Woodriver, Ill. His home address is 135 W. Tydeman, Roxana, Ill.

Lt. B. C. **Compton**, USNR, is in the Pacific area, his address being V.R. 13, FPO, San Francisco, Cal.

Capt. George J. **Decker** has just returned from the European Theater of Operations and is now stationed at 161 Tac. Ren. Sq., Drew Field, Fla. His home is in Sioux City, Iowa at 425 South Fowler street.

Robert **Gardner** writing from Pasco, Wash., expected to be home in Waterloo, Ill., sometime in November.

W. R. **Ellis** has been discharged from military service with the rank of Major and is back at his old job with Westinghouse. Bill is living at 319 Swissvale avenue, Edgewood, Pa.

Lt. R. P. **Haviland** is now located at 3189 Stafford street, Fairlington, Va.

Capt. Robert G. **Livingston** has returned to Rolla after several months overseas. Bob is going to enroll for a Master's degree in Civil Engineering with the semester beginning on Jan. 28. His home address is 302 W. 10th street, Rolla.

Jack **McCaw** is spending his vacation in Rolla. He has been employed for the past five years in heavy construction work by DuPont Company. He spent 22 months in the constructing of the atomic bomb plant at Richland, Washington. Jack's home address is 308 W. 9th St., Rolla.

P. J. **Moore** is now instrument engineer for the Baroid Sales Division of the National Lead Company in Houston, Tex. His new address is c/o Baroid, 2616 Pol, Houston, Tex.

Walt **Mussell** is in Co. C 178th Engr. Bn. APO 403, New York, N.Y. Walt is in Nurnberg, Germany.

George E. **Mueller** gives his address as RFD No. 1, Box 236, Red Bank, N.J.

Capt. Wm. F. **Oberbeck** visited the campus on Sept. 27. Bill was wearing six service stripes on his sleeve, representing 39 months overseas, 16 of which were spent in Alaska in the construction of the Alcan Highway, and 23 in Europe. He is wearing five battle stars and the War Dept. Unit Citation for his work in Canada. His home address is 415 Greenfield drive, St. Louis 5, Mo.

George O. **Pitts** visited the campus on Oct. 14. George has just been discharged as Chief Petty Officer in the Maritime Service. He is visiting at his home at Warrenton, Mo.

Capt. Edgar F. **Pohlmann** visited the campus on Oct. 1. Ed had just received his discharge from the army. Ed is wearing six battle stars, the Purple Heart, the Silver Star and the Bronze Star. He was two and a half years overseas in the MTO and has recently been stationed at Fort Leonard Wood. His discharge is effective on Dec. 20. His home address is Baden Station, Route 3, St. Louis, Mo.

Lawrence A. **Roe** is employed by the Battelle Memorial Institute and has recently moved into his own home, 3060 Devon road, Columbus 8, Ohio.

Maj. Leroy E. **Smith** visited the campus on Oct. 15. Leroy has just been discharged from the army and is returning to his position with the Toledo Edison Co., Toledo, Ohio. He has been in the army for four and a half years and overseas three years, in England, France, Belgium and Germany. He is wearing three battle stars and the Bronze Star.

Kenneth H. **Tuckett** is now employed by the

Engineering and Development Company, 53 West Jackson boulevard, Chicago 4, Ill.

Harry Tushman is metallurgist with the Wyman-Gordon Co., in Worcester, Mass. His home address is 93 Penn avenue, Worcester.

Lt. (jg) I. J. Ulak returned to the States and spent a 30-day furlough at home. He is now back at Camp Endicott in Rhode Island.

1940

Herman J. Andresen visited the campus with his wife on Oct. 19. Andy, a captain in the Engineers Corps, has been 35 months overseas. He wears 3 battle stars representing Kwajalein-Eniwetok, Saipan and Okinawa. He expects to be discharged during the first part of November.

Clayton W. Bentley and his wife visited the campus on Dec. 19. Clayton is living at 1746 Bryn Mawr, East Cleveland, Ohio.

Edwin H. Borgman is now with the Wright Aero Corporation, at Paterson, N.J.

Capt. W. E. Buck is now stationed at the 316th AAFBU, MacDill, Fla.

Woodrow L. Burgess who is with the U.S. Engineers, Mountain Home, Ark., visited the campus Dec. 31. He has just returned from Barksdale Field, La., where he worked on the construction of B-29 runways and aprons.

Sidney Caplovitz is a private in the U. S. Army and his home address is 8520 3rd avenue, North Bergen, N.J.

Lt. Carl H. Cotterill was a campus visitor on Oct. 14. Carl was on terminal leave expecting discharge soon and then is returning to his wife's home in Dumas, Tex. His address there is Box A-303.

Capt. Clyde Cowan has returned to the United States with his wife, Betty, and their small daughter. Clyde met and married Betty in England. After a visit with Clyde's parents in St. Louis, he reported to Santa Ana, Cal., for redistribution and was ordered to Wright Field at Dayton, Ohio where he is working in the Radar Laboratory. His address is Hq. ATSC, TS. Eng. Radar, Wright Field, Dayton, Ohio.

Capt. B. A. Dennis Jr. visited the campus on Oct. 8. Capt. Dennis has been overseas for 20 months and has served for five years in the army, going first to England and then to North Africa. He has now been discharged and his home address is 855 Pickwick, Springfield, Mo.

Ens. Paul T. Dowling is now stationed c/o U.S. Naval Magazine, Bangor, Wash.

Richard J. Followill gives his home address as 604 West 7th street, Rolla, Mo.

Thomas J. Griffith resides at 3227 St. Mary's avenue, Hannibal, Mo.

Ens. A. R. Hall ex-'40 writes from the USS Casinghead YO-47, FPO San Francisco, Cal., that he is engineering officer on a Diesel electric ship now stationed at Yokosuka Navy Yard at Yokosuka Ko, Tokyo Bay. So far, Rish says he has had one pretty good typhoon on the way there which caught them 50 miles out of Tokyo and which they tried to beat in to Tokyo Bay. This was followed by 3 more after they had anchored in the bay. Rish writes that the Japs can have their typhoons, cherry blossoms and everything else as far as he is concerned as he is expecting a discharge on Dec. 1 and will be a civilian again, returning to MSM to complete his education.

Wm. Hartman ex-'40 has been honorably discharged from the navy.

Edward W. Heiss is receiving mail at Box 1543, S.S. Sta., Springfield, Mo.

Herbert C. Heinicke has moved from St. Louis to Cleveland, Ohio, where he is employed by the Arthur G. McKee & Co., working as a designer. His company is engaged in the rebuilding of Dutch East Indian Refineries on which work Herbert is employed. His home address is 4656 Broadview road, Cleveland 9, O.

A. R. Herzog visited the campus on Oct. 4. Al has just been discharged from the navy where he held a commission as lieutenant, having been in service since July 7, 1941. He served first as engineer officer and later as executive officer on the USS Mt. Baker, an ammunition ship on which he saw duty for 44 months. His experience was in the Atlantic theater, the Mediterranean theater and Pacific theater. Al is visiting for awhile at his home in Ste. Genevieve, Mo., and will then return to his old job with the American Cresoting Co., in Louisville, Ky.

Herbert O. Kimmel has been discharged from the army where he held the rank of captain. He has accepted a position as geophysicist with the Carter Oil Co., and is now living at 1427 South Cheyenne, Tulsa, Okla.

Lawrence R. Hinken has moved from 236 S. Spring Ave. to 824 S. 8th St., LaGrange, Ill.

Maj. John R. Klug visited the campus Nov. 7. John has been overseas for 18 months and is wearing four battle stars for the Ardennes, northern France, central Europe, and the Rhineland. He also wears the Bronze Star with Oak Leaf Cluster. On his return home John first saw his son, John Robert Jr., who was born Jan. 27, 1945, while Maj. Klug was overseas. His home address is Box 126, Richland, Mo.

Maj. Robert J. Klug is in Hq., 166th Engr. C Bn., APO 403, c/o PM, New York, N.Y. His home address is Box 126, Richland, Mo.

Lawrence E. Lambelet, USNR, of 1024 Morrell avenue, Rolla, Mo., visited the campus on Dec. 31. Lawrence has been overseas for the past year and was recently at Pearl Harbor in Intelligence Work.

Lt. Col. Walter P. Leber is now with the G-4 Section, Hq. TSFET (Main), APO 757, New York, N.Y. Throughout the war in Europe, he was with the Engineer Section, Advance Section Communications Zone. He says he did some interesting engineering work significant among which was constructing five fixed bridges across the Rhine, one of them in a little over 6 days. Walter has been overseas three years and hopes to be back for the 75th anniversary celebration.

Capt. Rolland W. McFarland is in Hq. AAF, AFS, 33rd BU, 2207 City Hall Bldg., Kansas City 6, Mo. His home address is 228 N. 22nd street, Quincy, Ill.

Ferd Machmer visited the campus on Oct. 15. Ferd is living at 2743 Keokuk, St. Louis, Mo.

Julius C. Leslie receives his mail at R. No. 4, N. Kansas City 16, Mo.

John S. Markley is living at 100 Academy avenue, Pittsburgh 16, Pa.

Lt. John W. Metcalf is in the navy overseas. His address is Motor Pool Lion Nine, Navy No. 3923, FPO San Francisco, Cal.

Arthur P. Morgan, formerly with the Bureau of Mines in Rifle, Colo., has moved to Shattuck, Oklahoma.

Clarence E. Palmer is with the Ambursen Engineering Corp., 800 Herman Bldg., 204 Travis street, Houston 2, Tex.

Ens. Jason M. Patrick is now on permanent duty with the 96th NCB, his address being 96th USNCB, c/o FPO, San Francisco, Cal.

Capt. Theodore J. Planje receives mail c/o H. C. Kelting, 113 Bates, St. Louis, Mo.

Robert Preston Powell who has been imprisoned in a Japanese prison camp since the fall of the Philippines has now been released according to word received from Capt. Robert Silhavy and Capt. Eugene Boyt. Bob was with Capt. Silhavy and Boyt in the last prison camp in which they were held in Japan. Bob has returned to the Philippines where he is trying to straighten out his father's estate, his father and brother having been killed by the Japs during the invasion.

Capt. Franklin D. Priebe gives his address as Co. A, 858th Engr. Avn. Bn., APO 627, c/o PM, New York, N.Y.

Maj. Joe Rakaskas has recently been discharged from military service and is at his home at 9 Redwood avenue, Patterson, N.J.

Robert P. Ridley has been discharged from military service and is at his home at 4546 Washington avenue, St. Louis 8, Mo.

L. J. Riege visited the campus on Oct. 30. Lynn is with the Republic Steel Corp. in Chicago, his home address being 1645 East 85th street, Chicago, Ill.

Capt. James Rushing and his wife visited in Rolla in the middle of November. Jim had just returned from a number of years of service overseas. He made the landings at Algiers, Italy and participated in the Normandy campaign and the Campaign of northern France. He was transferred to the Pacific via the U.S. and fought through the Okinawa campaign, being one of the few American officers to serve in both theaters. Jim returned to the States on Oct. 8 and is now on terminal leave. He is wearing six battle stars and the Bronze Star Medal for service con-

nected with the Normandy campaign. He also wears the Bronze Arrowhead for the amphibious assault in the European theater. His home address is 246 N. Volutsia, Wichita, Kan.

Ernest C. Sell is with the Olin Aluminum Corporation at Tacoma, Wash. His home address is 605 S. Pine, Tacoma.

F. M. Stewart has been discharged from the navy and is now with the Stanolind Oil & Gas Co., P.O. Box 40, Casper, Wyo., the job which he left to enter military service.

Herbert D. Sturges has moved from Glendale, Ohio and is living at 69 Union avenue, Little Falls, N.J.

Lt. Thurman M. Thomes is now at Ellington Field, Tex. His address there is Box 954. His home address is 806 Vine street, Poplar Bluff, Mo. Thurman writes that the MSM Alumnus is greatly appreciated and that his fraternity, the Sigma Pi, is trying to promote a "rip-roaring" St. Pat's in '47 and that he is laying his plans to visit the campus on that day.

Edgar Thompson is district engineer with the Mexico District of the Power and Light Co., stationed at Mexico, Mo.

Maj. Norman P. Tucker is stationed at Fairmont AAF, Geneva, Neb. His home address is 1206 Elm street.

Arthur E. Twiehaus gives his present address as 1130 W. 7th street, Gary, Ind.

C. H. Plenge-Washburn gives his address at Cerro de Pasco Cooper Corp., OROYA, Peru, S.A.

Maj. and Mrs. Charles Ward of Pueblo, Colo. spent their vacation in Rolla in early November.

1941

Washington Adams is with the E. F. Johnson Company in Waseca, Minn. His home address is 714 3rd avenue, Waseca, Minn.

Maj. Andreas A. Andreae is stationed with the 1264th AAF Base Unit, NAFD-ATC, APO 788, c/o PM, New York, N.Y. His home address is 17 Berkeley Square, Los Angeles 7, Cal.

Capt. Virgil O. Becker is now in Hq. Engr. Opns. Group C, NBS, APO 562, c/o PM, New York, N.Y. His home address is Baden Station, St. Louis 15, Mo.

Lt. (jg) Norman Blair visited the campus on Nov. 11. Norman has just returned from 14 months in India on shore duty with the Navy engaged on Naval Ordnance work. He came back to the States on Sept. 17 and reported to Great Lakes, Ill., for reassignment on Oct. 19. Norman has almost enough points to be released from the Navy. In Calcutta he saw Art Brune '41, now a graduate student on the campus and Herbert Crecelius '39. Norman's home address is 1203 Hamilton avenue, St. Louis, Mo.

Clifford M. Boutin visited the campus on Nov. 19. Clifford is utility foreman with Cooperative Refining Association at Coffeyville, Kan. His home address is 206 W. 5th St., Coffeyville.

Lt. Arthur W. Brune visited the campus on Sept. 25. Art has been overseas for two years in the CBI theater in connection with the air transport command. He is wearing one battle star. He has received his discharge and is now enrolled as a graduate student in MSM for a Master's degree in Mining.

Capt. R. R. Brookshire visited the campus on Nov. 5. Red has been two years overseas, spending over one year on the Alaska highway and less than a year in Germany. He got into Germany in time for the last big push and wears one battle star for the battle of Central Europe. He is on terminal leave and is returning to his old job with the U.S. Engineers in St. Louis. His home address is 109 South Pine, Rolla.

Fred F. Burgett is at his home at 805 West Green street, Decatur, Ill., after four years in the Army Air Corps Reserve as a single engine fighter pilot.

Lt. Comdr. C. F. Clarkson writes that he is eligible for release from active duty in the navy and hopes to become a civilian soon. Charles became a member of the Naval Reserve, V-7, in July, 1940, and went on duty aboard the USS Wyoming as an apprentice seaman for a month's training. Upon graduation from MSM in 1941 he went to the Naval Reserve Midshipman School in New York and received a commission as an Ensign and was ordered to duty aboard the USS McFarland at Pearl Harbor

where he served as assistant Engineering Officer until January of 1943 when he was transferred to San Pedro, Cal., to await the commissioning of the USS Crenshaw on which he has served to the present date. While on the McFarland, the ship was awarded the Presidential Unit Citation for outstanding performance in action while on special missions in the Solomon Islands area during August, September, October, 1942. The USS Crenshaw has many of the latest designs in Marine engineering incorporated within the plant. His home address is 3802 St. Ann's lane, Normandy, Mo.

Andrew Cochran and Mrs. Cochran announce the birth of a baby girl, Elizabeth Ann, born to them on Oct. 22, 1945. Andy is with the Phillips Petroleum Company, 107 N. 13th street, Kansas City, Mo. They are living at 3701 Wood avenue.

Robert G. Couch is in the army with the Quartermaster Board at Camp Lee, Va.

Donald G. Creelius was a campus visitor on Oct. 11. Don has been working in Oak Ridge, Tenn., since Feb., 1944 with the Union Carbide and Carbon Company working on the Atomic Bomb and in connection with his work he had frequent contact with Dr. Thomas Day, former teacher in the chemistry department on the campus. Don is living at 102 Boone Hall, Oak Ridge, Tenn.

Lt. Robert S. Dorsey was recently discharged at Scott Field, Ill., after spending four years in the Army Air Force. His home address is 203 E. Park street, Brookfield, Mo.

Pfc. Paul S. Elliott is now with Co. A, 342 Inf., APO 450, San Francisco, Cal. Paul was formerly with the 86th Inf. Div. in Europe.

John W. Gardner has moved to 841 E. Mountain street, Pasadena 6, Cal.

Edward C. Farrell gives 217 Clardy avenue, Malvern, Ark., as his home address. His business address is P.O. Box 358, Malvern, Ark.

Robert E. Fields has been discharged from the army and is now with The Atlantic Refining Co., in Dallas, Tex. His home address is 2525 Limestone place, Dallas 11, Tex.

Maj. Armin F. Fick was recently awarded the Bronze Star for meritorious service in connection with military operations from Sept. 13, 1944 to May 8, 1945. As Commanding Officer, 1776th Engineer General Service Company, he employed his company in furnishing engineering services for the 12th Army Group headquarters. He built and maintained the air strip at each of the various locations of the headquarters on the Continent. He is now stationed with the 6800th Engineers in Wiesbaden, Germany, APO 757, New York, N.Y. His home address is 4406 Clarence avenue, St. Louis, Mo.

Fred W. Finley is with Frank Horton Company at Lamar, Mo., doing electrical engineering consulting work specializing largely in the REA.

Maj. Alden G. Hacker who has been in the Army since 1941 is now on terminal leave. He visited MSM Dec. 7. His present address is 4527a Harris, St. Louis, Mo.

Clyde K. Hanyen is now a radio technician. His address is 1629 16th street N.W., Washington, D.C.

Lt. James V. Heddle is stationed at the YMCA, Philadelphia, Pa., and is expecting discharge.

Capt. Edward F. Holland visited the campus on Nov. 2. Ed went overseas in March, 1942, along with Ken Kyle '41. They landed at Townsville, Australia, and went from there to Port Moresby, then to Lae, Natzab and Finschhafen. Ed is wearing three battle stars and the Presidential Unit Citation. He came back to the States in April, 1944, reporting to a hospital for malaria treatments, then went to the New York Port of Embarkation. Since discharge, he is Construction Superintendent with the Henry Perkinson Construction Co., 132 E. Douglas St., St. Louis, Mo. His mailing address for the present is 201 Elm street, Rolla, Mo.

Henry James is employed by the Ralston Purina Co. in the engineering dept. His address is 5237 Cates avenue, St. Louis, Mo.

Capt. James P. Katz is at the home of his parents Mr. and Mrs. Howard Katz, at 601 West 11th street, Rolla, on terminal leave from the 15th Army Air Force after serving 19 months in Italy.

Carl G. Kind is aviation radio technician at the Receiving Station 3149, FPO, San Francisco, Cal. His home is in Warrenton, Mo.

Nelson A. Koerner lives at 3549 Victor street, St. Louis 4, Mo.

Lt. Karl E. Krill gives his home address as 23 S. Taylor avenue, St. Louis 8, Mo.

Ken Kyle is with Burns & McDonnell Engineering Co., at 107 West Linwood Blvd., Kansas City 2, Mo. Ken is living at 4201 Locust street, Kansas City 4, Mo.

Joseph L. Lessman, formerly with Fort Pitt Steel Casting Company at McKeesport, Pa., is now with American Steel Casting Co., Newark, N.J. He lives at 65 South Oraton Parkway, East Orange, N.J., where he should be addressed.

Robert H. Meyer visited the campus on Oct. 29. Bob has been discharged from military service and was enroute to his home at RFD 2, Box 567, Concord, Cal.

Harold J. Nicholas is planning to do graduate work at St. Louis University School of Medicine in the department of biochemistry.

A. Henry Nickerson receives his mail at P.O. Box 5, Samoset road, Eastham, Mass.

George M. Pace receives his mail at No. 4 Pier avenue, Box 407, c/o Mrs. Robert Boice, Hermosa Beach, Cal.

Lt. (jg) Anthony C. Pautler, whose home address is 403 S. Oak street, Union, Mo., advises that his new military address is VPB 133, c/o FPO, San Francisco, Cal.

William M. Puetz who has been in the Army for the past several years is back home in Linn, Missouri.

Ens. Frank Rogers visited the campus on Sept. 26. Frank is leaving for Oahu, Hawaii, where he will be stationed for some time in the future. His address is Navy No. 66, FPO San Francisco, Cal.

Rolf Roley is living and working in Staunton, Ill.

Mike Scheriff has returned from South America and is now visiting at the home of his mother, Mrs. C. Scharafinski, 2834 Michigan avenue, St. Louis, Mo.

E. C. Sell is with the Olin Industries at Tacoma, Wash., his home address being 605 South Pine street, Tacoma 6, Wash.

Maj. Robert M. Sexton has returned to the States from overseas and is now living at his home at 520 Westgate avenue, University City 5, Mo. Bob has spent 35 months overseas.

Floyd P. Smith and Mrs. Smith announce the birth of a daughter, Sue Ellen, born Nov. 18, 1945 at the Waynesville Hospital, Waynesville, Missouri.

Lt. Harvey C. Stevens, whose home address is 710 S. Ohio, Sedalia, Mo., gives the following military address: 49 Bomb Sqdn., 2nd Bomb Gp., APO 534, c/o PM, New York, N.Y.

Allan J. Summers was a recent campus visitor. Allan has been overseas for two years, in England one year and into France on D-Day where he remained one year. He is wearing two battle stars and the Invasion Arrowhead. Allan was assistant port engineer of the 11th Major Port in England and in France. He operated the Bristol Channel Ports in England for one year and the Port of Rowen in France. Between these two operations he served in the Omaha Beach Command.

Robert L. Topper visited the campus on Nov. 26. Bob is now living at 4409 Flora avenue, Kansas City, Mo.

Herbert A. Volz writes from Okinawa that he is thinking of returning to school for graduate work after his discharge. Herb is a corporal in the Marine Corps and his home address is 4800 Rhodes avenue, St. Louis 16, Mo.

Lt. Ray E. Vaughn is now located at 4009 Longfellow street, Hyattsville, Md. His home is in Dawn, Mo.

Capt. Chris Wattenbarger has been discharged from the army and is now employed by Frank Horton, consulting engineers, at Lamar, Missouri.

Richard Weaver has been on Okinawa for the past six months.

Joseph G. Wink is with the chemical products department, Phillips Petroleum Co., Bartlesville, Okla.

1942

John C. Allen is now living at Lewiston,

N.Y. John writes sending a substantial contribution to the John Rayl Memorial fund and expressed the hope that this fund would help some students as much as the Jackling Fund helped him. John has just been discharged from military service and writes that he expects to return to school at Rolla for the second semester if all goes well.

John C. Austin is with the Aluminum Co. of America and is living at 124 Liberty avenue, Massena, N.Y.

Lt. (jg) G. W. Axmacher gives his address as USS Selinar, AKA41, c/o FPO San Francisco, Cal., and writes the following:

"The June-July Alumnus reached me a few days ago while we were in Saipan. It sure was a welcomed bit of reading. At the present we are in Japanese home waters after bringing in some occupation troops. I have hopes of going down to Nagasaki to just see what the atomic bomb did. We are anchored not too far away from their Sasebo Naval Base. I am still assistant engineer aboard this ship. The duty isn't bad, but we all are mighty anxious to get back home and get started again. Maybe I am optimistic, but I kind of figure on attending the next St. Pat's."

Lt. (jg) Harry A. Bagley Jr. is living at 310 E. Washington avenue, Mt. Vernon, Wash.

Mark W. Beard advises that his address is 465 Foote avenue, Webster Groves, Mo.

Capt. Robert M. Brackbill is stationed at Rome Army Air Field, Rome, N.Y. He expects to be discharged sometime in November.

Everett J. Birch is at the Darwin Mines of the International Smelting & Refining Co. at Darwin, Cal.

John E. Brinkmann is serving in the army assigned to a Smithsonian Institute project working on the equipment of a Solar Radiation Observation station. John's home address is 2105 North 28th street, Milwaukee 8, Wis.

Ens. Ralph Brouk is stationed in Washington, D.C. He resides at 1426 21st street, N.W., Washington, D.C.

H. W. Brueschke is living at 531 Washington place, East St. Louis, Ill.

Harold B. Bute is employed by the Harbison-Walker Refractories Co., and is living at 4206 Banning avenue, East Chicago, Ind.

Hugh M. Clark is living at 321 Oakley lane, Kirkwood 22, Mo.

Lt. R. J. Cunningham, USNR, visited the campus on Nov. 6. Dick was on terminal from the navy and will be discharged effective Jan. 9. He went overseas in March 1943, going into North Africa. He was with the invasion of Sicily and Salerno Beach and then went to England and participated in the invasion of Normandy, going in on D-Day. He is wearing four battle stars. Dick was married July 7, 1945, to Miss Dorothy Agnes Davis at Winnemac, Ind. His present address is 5266 Maple avenue, St. Louis, Mo.

Lt. Walter E. Doelling writes that his present military address is 838th Engr. Avn. Bn., APO 528, NYC. His home address is 3827 Oakridge, Normandy, Mo.

Robert S. Dorsey has purchased the Patrick Insurance Agency in Brookfield, Mo., and is now doing business for himself. His address is 224 South Main street, Brookfield.

Capt. Brandon L. Ebeling gives his address as 714 Jackson street, St. Charles, Mo. Brandon wrote Dean Wilson recently sending a contribution to the class of '42 Memorial scholarship fund.

William Eisman is a sergeant in the Army with Battery B, 2 FA, Obsn. Bn. APO 758, c/o PM, New York, N.Y. Bill has sent a substantial contribution to the class of '42 Memorial fund.

Roy M. Ferris is working for the Magnolia Petroleum Co., in Beaumont, Tex. His address is P.O. Box 668.

Lt. (jg) Melvin C. Flint is with the Naval Research Laboratory in Washington, D.C. His home is 13 Danbury street S.W., Apt., Washington, D.C.

Lt. James H. Fox is being discharged from the Army and is now at the home of his wife in Rolla, Mo. His home address is Box 542, Rolla.

Anthony F. Gonski is on terminal leave from the army. His present home address is 1120 Jackson street, Camden, N.J.

George D. Grayer is living at 8437 N. Hawthorne street, Milwaukee 13, Wis.

Bob Guilfooy is assistant to the manager of the St. Louis plant of the Ralston Purina Co. Bob is living at 7434 Gravois, St. Louis, Mo.

Lt. (jg) Arthur T. Guernsey has returned from Alaska and is stationed in the Assembly & Repair Dept., Box No. 12, U.S. Naval Air Station, Miami, Fla. His home address is 5166 Waterman avenue, St. Louis 8, Mo.

Capt. Gilbert G. Haas is with the 318th Engr. Combat Bn., APO 93, c/o PM, San Francisco, Cal. Gilbert's home address is Route 1, Rolla, Mo. Gilbert writes that he has received the *Alumnus* regularly and that each issue has proven more interesting than the previous one as it was the only way he had of knowing what was going on with the large number of his many friends he met while attending MSM. "I'm sure that all those who have received recent issues of the *Alumnus* realize, as I do, the importance of a strong and active Alumni Association, not only for the betterment of MSM but for the advantages to each individual alumnus." Gilbert hopes to return to the States in the near future. He has met Capt. Leslie Payne '40 while stationed at Zamboanga.

Capt. Bailey W. Hagar is with the 6824 H & Hq. Civil Affairs Co., APO 777, c/o PM, New York, N.Y. His home address is 2422 Hope, Hannibal, Mo.

Ens. Eugene E. Hamm ex-'42 is still in the Navy, his address being Navy No. 918, Box c, c/o FPO New York, N.Y. Eugene writes that he is planning to resume his studies at MSM following discharge.

Hugh Harness Jr. is living at 645 N. 56th street, E. St. Louis, Ill. Hugh is with the Aluminum Ore Company.

Capt. Philip I. Hendricks is with the 2826 Engineer C Bn., APO 403, c/o PM, New York, N.Y. Phil writes sending his contribution to the class of '42 Memorial fund.

Capt. Thomas A. Hughes is now with the 2233rd Engr. Const. Serv. Sect., APO 244, c/o Postmaster, San Francisco, Cal. Thomas is at present working as understudy to the Administrative Chief in the Office of the Engineer, Headquarters, Western Pacific Base, Command. He says he saw Dick Wheat at Eniwetok Island.

Carl Johnk has been discharged from the Navy and has returned to the faculty of MSM. He is living at 908 Main street in Rolla, Mo.

Joseph T. Karbosky is living at 108 E. 8th street, Coffeyville, Kan.

Fred Kisslinger is now living at 440 Riddle road, Cincinnati 20, Ohio.

Welby M. King is living at 5387 Pershing avenue, St. Louis, Mo., being connected with Lewin Metals Corp., Monsanto, Ill. Welby and his wife are parents of a new daughter, Delores Lucille, born June 5.

Paul W. Kloeris Jr. has moved from St. Louis and is now living at 506 N. Elmwood, Waukegan, Ill.

Harold A. Kreuger is living at 1418 Cleveland, Baxter Springs, Kan.

W. J. Lawler has left New Kensington, Pa., and is now residing at Gen. Putnam Inn, Norwalk, Conn.

Hyman Leggett is research chemist with Bell and Howell Co., Chicago, Ill., and lives at 3831 N. Fremont avenue, in Chicago.

G. R. Leland is with the Wellington Explorations, Ltd., Edificio Tobon, Medellin, Colombia, S.A. George writes sending a substantial contribution to the class of '42 Memorial fund.

Norman R. Loesing visited the campus on Nov. 29. Norman has been an Ensign in the navy and wears two battle stars, one for Wake Island and the home island strike against Japan. Norman was flying planes from the deck of the Lexington and was over Tokyo quite often. He expects to be discharged about the first of the year.

Vernon Loesing visited the campus on Sept. 28. Vernon had been 20 months overseas, having left the States on New Year's Eve in 1943 and returned Aug. 29, 1945. Vernon landed at Casablanca in Italy in January, 1944 and from there went into the vicinity of Oran in Algeria, where he saw Capt. Arthur Dennis Jr. '40. Leaving Oran in March, 1944, Vernon went to Naples, Italy, and went at once into combat. There he

saw Capt. Jack Witt '42 and Capt. Kenneth Schowalter '42. Jack was Company Commander of a battalion that was supporting the unit Vernon was in and Ken was in an adjoining battalion. In June of 1944, he met Lt. Don Falkingham '41 in Rome and he saw Capt. Ed Pohlmann '39 in May of 1944 in southern Italy. He also saw Maj. Wm. Puetz '41, south of Florence in August, 1944, and Capt. Sid Burberry '42 in Florence in January of 1945 and again in July of 1945. Capt. Presley Paul '42 and Capt. Paul Kloeris '42 were in the same battalion with Vernon. Presley was wounded in the Rome-Arno campaign by a land mine. Vernon saw Presley again in Leghorn, Italy and he also, in his travels, met Maj. Herbert C. Wolf '38 south of Florence, Italy. Vernon's home address is R.R. 10, Box 867, Ferguson, Mo.

Daniel C. McLean has moved from Meadville, Pa. to Bethany, West Va., Box 201.

Clarence L. Merrell writes from BOQ, USN AS, Ottumwa, Iowa, indicating that he is expecting a discharge from the Navy in the not too distant future.

1st Lt. Paul C. Nelson visited the campus on Nov. 2. Paul is being discharged from military service and will be at his home address, 4217 Washington Blvd., St. Louis, Mo. He has been overseas since Jan. 1943, when he went to New Caledonia, then to the Russell Islands and Guadalcanal. He was engaged in radio communications work. His discharge will be effective Feb. 5, although he is on terminal leave at this time.

James R. Nevin is living at the Brigantine Hotel, Brigantine, N.J. Jim is in the U.S. Naval Air Corps. He wrote Dean Wilson sending his contribution to the Memorial Fund for the members of the class of '42, who gave their lives in military service and pledged his cooperation in making the fund a success.

Lt. (jg) David W. Owens is now on the USS Newcomb DD586, FPO San Francisco, Cal.

Lt. (jg) K. A. Roffmann is now living at Apt. 2A, 4702 Nichols avenue S.W., Washington 20, D.C. Kenny is working in the navy yards in Washington.

1st Lt. Bion D. Pewitt is with the Signal Corps at Headquarters, 59th Air Depot Group, Kelly Field, Tex.

Lt. J. A. Preistly visited in Rolla early in November. He is stationed at Sioux City, Ia.

Ens. Richard S. Radcliffe is with the Air Transport Command on Kwajalein Island at present. His mailing address is VPB 109, FPO San Francisco, Cal.

Lt. Harold Rueff ex-'42 gives his home address as 5863 Maple avenue, St. Louis, Mo.

Lt. (jg) John A. Schwaig is now on the USS Athene, AKA 22 c/o FPO San Francisco, Cal. John is living at 5027 Minerva avenue, St. Louis 13, Missouri.

Capt. K. A. Schowalter gives his address as CWS, TSFET (Main), APO 757, c/o PM, New York, N.Y.

Carl F. Schwab Jr. is with the Schlumberger Well Surveying Corp. in Beaumont, Tex., his home address being 1567 Gladys, Beaumont.

Kenneth Sherman is back from the Aleutians and has been in the Lambert Field Hospital for an appendectomy.

Ens. A. T. Sindel Jr. gives his address as 93 NCB, c/o FPO San Francisco, Cal. His home address is 4144 Paseo, Kansas City 4, Mo.

Lt. Harry B. Smith is living at 4743 Lee Blvd., Arlington, Va. while in service. His home address is 109 S. Highland Ave., Baltimore, Md. D. R. Strehlau is living at 7431 N. Seeley avenue, Chicago 45, Ill.

Ens. Robert L. Stowell gives his address as CBMU 573, FPO San Francisco, Cal.

Capt. O. H. Taylor is now with the 1350 AAF BU, APO 627, New York, N.Y.

Capt. Robert Van Nostrand is still in military service and gives his address as 3138 Signal Service Company, APO 887, New York City.

Lt. Gene M. Veale is on the USS Pipefish (SS 388), c/o FPO, San Francisco, Cal.

Edwin C. Vogelgesang has been overseas for a number of months. He is at present in Manila, P.I.

Dell C. Wade is living at 1446 S. Baltimore, Tulsa 5, Okla.

Ben E. Weidle has accepted employment with

Westinghouse Electric Corporation, Pittsburgh, Pa. Until further notice his mailing address is 5387 Pershing avenue, St. Louis, Mo.

Leonard C. Wolff is receiving mail at 7351 Flora avenue, St. Louis 17, Mo.

Lt. (jg) Jacques W. Zoller was a campus visitor on Oct. 18. Jacques is living at 2619 So. Peoria avenue, Tulsa, Okla. Jacques has been 26 months overseas and wearing four battle stars, including the one for the Gilbert Islands, Tarawa, Saipan and Iwo Jima. He saw Nick Mushovic in Pearl Harbor recently. Jack served on a destroyer escort. He reported back to New Orleans on Oct. 26 for orders for he is expecting discharge in about six weeks.

1943

Lt. Joe Adams visited the campus on Dec. 28. Joe is still in military service but hopes to be discharged in the near future. Upon discharge he will take up his position as Sales Engineer with the Busch-Selzer Bros. Diesel Engine Co., 2nd and Utah streets, St. Louis, Mo.

Cpl. Harold E. Amlis is stationed at Wright Field, Dayton, Ohio. He is living at 106 River Bend drive, Dayton. Harold writes that he is hoping to be a civilian in the not too distant future.

1st Lt. William Anderson is with Co. A. 33rd Engineer Training Bn. at Fort Leonard Wood, Mo. Bill visited the campus on Dec. 15. He is just home from the Philippines where he went in October 1944, and is wearing the Philippines' Liberation ribbon. On his return home, Bill saw for the first time his new son Paul Clark Anderson who was born while he was overseas. Bill's wife and family are now living at Silver Springs, Maryland.

Ewin H. Barnett writes that his present address is Navy 3233, c/o FPO, San Francisco. His rating is now RT 2/c.

Lt. Joseph P. Berndt Jr. visited the campus on Oct. 30. Joe was on terminal leave from the army and is staying at the home of his parents, 6943 Idaho avenue, St. Louis. He has been 19 months overseas going into France on July 1. He wears four battle stars, the Bronze Star and the Presidential Unit Citation. He also wears the Purple Heart as the result of wounds received when a road grader he was driving ran over a German mine, exploding it beneath the front wheel. Joe worked with Capt. Sherard Heneghan '43 and Lt. Clarence Lambelet '43. He also visited with Lt. Ken Mooney '43, Lt. Enos Key '43, Lt. George Wagner ex-'44, Capt. Bailey Hagar '42 and Maj. Vernon Loesing '42, at various times while in military service in France and Germany.

Albert DeValve writes from Crimora, Va., where he is now instrument man with the Engineering Department, Construction Division of E. I. DuPont de Nemours and Company, Inc. He is helping lay out a large addition to their Waynesboro rayon plant.

Albert writes, "Though I graduated in 1943, I enclose a contribution to the John Whitecay Rayl Memorial fund, since I would have graduated with him had I completed my courses according to schedule. I entered school with him and Melvin Ullrich and knew both of them well and was much grieved to learn of their deaths."

Maj. Ralph Elsea is now receiving mail at General Delivery, Turnwater, Wash.

Lt. (jg) Jack E. Fleischli is assigned to a minesweeper. Jack writes that he has been in the middle of a big job, that of sweeping the many magnetic mines laid by our superforts during the war, and those laid by the Japs as defensive measures. This operation has taken him all along the coast of Japan and Formosa, and he has seen many interesting places, including Hiroshima and Nagasaki after their destruction. Jack hopes to return to the States in the spring but until then his address is USS Strive AM 117, FPO, San Francisco, Cal.

Pvt. Harold W. Flood who has been with the Nicaro Nickel Company for the past two years, is now in military service. His address is: ASN 37821676, Co. U, 1st Regt., ASFTC, Aberdeen Proving Ground, Md.

Mary B. Joynt, wife of Kenneth R. Joynt writes telling Kenneth is overseas with the Navy and that his home address is 270 South Brimball, St. Paul, Minn.

M. K. Main is now with the Shell Oil Co.,

Inc., in Kilgore, Tex.

1st Lt. Kenneth H. Mooney is in Schwetzingen, Germany. Ken writes that he had just finished reading the August-September issue of the *Alumnus* from cover to cover and the parts about his MSM friends are of particular interest to him. At present he is with a unit of the 7th Army with Lt. Enos Key '43, Lt. Clarence Lambelet '43 and Sgt. Geo. Miller ex-'46, nearby and they see each other often. He also saw Capt. Howard Durham '43 last June in Salzburg, Austria, and Joe Berndt '43 before he left for the United States. Ken's home address is 4111w Rossalie street, St. Louis, Mo.

Lt. Ambrose E. Pritchard is in Calcutta, India, his address being 1304 AAF BU ATC, c/o PM, New York, N.Y.

J. V. Boland Jr. visited the campus on Oct. 1. Johnny was representing the Boland Construction Co. in connection with the bid on the proposed new power plant at MSM. His home address is 2715 Dalton avenue, St. Louis, Mo.

Ens. Robert F. Bruns visited the campus on Stp. 14. His home address is 4879 San Francisco, St. Louis 15, Mo.

Waldemar M. Dressel has resigned his position with the U.S. Bureau of Mines in Rolla and has gone with the Gulf Oil Company at Fort Worth, Tex. He will be working under the supervision of C. D. Cordray '28.

Raymond O. Kasten was in Rolla on Oct. 11, visiting at the home of Dr. and Mrs. G. A. Muilenburg. Ray has finished his graduate work at Washington University and is now research engineer with the Union Wire Rope Corp., at 21st and Manchester, Kansas City, Mo.

Lt. (jg) Vernon E. Flessa, USNR, has been assigned to Escort Division 69 as Radar Maintenance Officer. He has participated in the invasion of the Philippines and Okinawa. His address is USS R. W. Suesens DE342, FPO San Francisco, Cal.

Robert L. Hanna gives his address as R.D. No. 1, Fayetteville, N.Y.

Ens. J. Richard Hansen gives his military address as FAW 4, c/o FPO, San Francisco, Cal. His home address is 120 Linden, Union, Missouri.

Capt. Roy L. Kackley Jr. is with the 1366 Engineer Dp. Trk. Co., APO 403, c/o PM, New York, N.Y. Roy wrote Dean Wilson that he had sailed from Marseille, France through the straits of Gibraltar down through the Panama Canal and was heading for points west. He states that he hears from Bill Anderson '43 quite often and Lt. (jg) Ted Hadley '43. He also writes that he has seen John Griffiths '44, and Lt. John Weidy '43, also in France. Roy writes that he expects to see a big reunion of the class of '43 as soon as things settle down a bit and that he is looking forward to a big old fashioned St. Pat's celebration.

Lt. Albert S. Keevil gives his address as Hqds. 95th Engr. G.S. Regt., Fort Lewis, Wash.

C. H. Krummel Jr. formerly worked for the Bethlehem Steel Co., Bethlehem, Pa., is now a private in the U.S. Army. His address is S.N. 37818989, 1718 SCU Sta, Com. Hq. Det., Ft. Leonard Wood, Mo.

Capt. Leonard N. Larson visited the campus on Dec. 6. Leonard is still in the army but is expecting discharge in the near future and plans to return to MSM to complete work for a Bachelor's degree in Metallurgy. Leonard was overseas for 14 months on Saipan. He wears three battle stars and the Presidential Unit Citation with Cluster. He was an Engineering Officer in the Air Corps.

Marion K. Main receives his mail at Rt. 1, Box 83, Webb City, Mo.

Lt. John A. Mazzoni gives his address, R.F.D. No. 1, Box 43, Hill-Villa, Layton, Utah.

Orville L. Meyer is a 2nd Lt. in the U.S. Public Health Reserve. He is stationed at 605 Volunteer Bldg., Atlanta, Ga.

1st Lt. Franklin L. McCutchen gives his address as C.O. 34th Sig. Radar Mant. Unit, APO 958, c/o PM, San Francisco, Cal.

1st Lt. Kenneth E. Meyer, whose home address is 9 Maple place, Huntington, Long Island, N.Y., is now stationed at Cherry Point, N.C. His address there is VMF-911-Mag 91, Marine Corps Air Base, Cherry Point, N.C.

John H. Olson is with the American Magne-

sium Corp., in Cleveland, Ohio. His home address is 17633 Harvard road, Cleveland 20, O.

Lt. (jg) James Paul is at the South Carolina Navy Yard.

Ens. James H. Polhemus, whose home address is Mascot, Tenn., can now be contacted at Mobile Explosive Investigational Unit No. 4, c/o FPO, San Francisco.

Pvt. F. J. Radavich, 31504639, is stationed at Aberdeen, Md. His address is 2nd ETC, No. 937.

Ens. P. B. Rothband, whose home address is 1237 Huntington road, Kansas City 2, Mo., writes that his military address is USS Harwood, DD 861, c/o FPO, San Francisco, Cal.

Lloyd C. Schumann is at Samar, Philippines, his address being 959-67-73, Box 24, NSN-3149, c/o Fleet Post Office, San Francisco, Cal.

Lt. Leo G. Spinner is living at 1411 Durham street, Brownwood, Tex. He is stationed at Camp Bowie, Tex.

James C. Spradling is now at the Wisconsin Institute of Technology. His home address is 409 S. Chestnut street, Platteville, Wis.

Lt. (jg) Henry M. Sloan visited the campus Oct. 9. Henry is in the Merchant Marine. His home address is 409 E. Capitol, Jefferson City, Missouri.

Donald J. Studebaker has been discharged from the Army and is temporarily at his home at Humansville, Mo.

1st Lt. Cornelius F. Stueck gives the following address: Headquarters V Fighter Command, APO 929, c/o PM, San Francisco, Cal. His home address is 540 Purdue avenue, University City 5, Mo.

Norman R. "Bob" Underhill visited the campus Dec. 7. Bob was discharged from the navy on Dec. 5 as a Lieutenant (jg) after two and one-half years of service as Engineer Officer on a mine sweeper. His home address is 17 Ridgetop, St. Louis 17, Mo.

Lt. Edward P. Vollherbst has an APO c/o Postmaster 14984, San Francisco, Cal.

Edwin O. Vandevan is now living at 1659 Broadway, Schenectady, N.Y.

1944

Rdm. 3/c Henry S. Adamick has a new address. It is USS Cabot, V-3 Division, c/o FPO San Francisco, Cal.

Robert P. Balin, formerly of St. Louis is now residing at 760 Jefferson avenue, Miami Beach, Florida.

Robert L. Banks has moved from Coffeyville, Kan., and is now at Piedmont, Mo.

H. D. Barnhart has been promoted to Lt. (jg) and is receiving mail at Electronics Lab. Navy Yard, Navy No. 128, FPO, San Francisco, Cal. His home is at 4700 S. Walker, Oklahoma City, Okla.

Daniel T. Blount, formerly of Cape Girardeau, Mo., has moved to 7336 Gayola avenue, Maplewood, Mo.

Don C. Brand is employed by the Monsanto Chemical Co. in St. Louis 4, Mo. His home address is 5351a Gladstone, Normandy 20, Mo.

Lorraine F. Bridge is on the USS Wayne (APA 54), and his address is c/o Fleet Post Office, San Francisco, Cal.

Ens. J. W. Brodhacker gives his present address as USS T. J. Gary (DE 326), c/o FPO San Francisco, Cal. His home address is 1249 N. Jefferson, Springfield, Mo.

Ens. Walter J. Dean gives his home address as 1070 Purcell, University City 14, Mo.

Pete Des Jardenes visited the campus on Sept. 28. Pete is an ensign in the navy stationed at Key West, Fla. His home address is 400 Altus place, Kirkwood, Mo.

John W. Domian is now living at 4679 Oldenburg avenue, St. Louis, Mo.

Ens. Tom B. Gettys is stationed in San Diego, Cal. His home address is 86 Washington street, East Orange, N.J.

Louis W. Grass gives his address as P.O. Box 2391, Philrich Branch, Borger, Tex.

Ens. Richard J. Hansen is on the PATSU 4-6, FAW-4, c/o FPO, San Francisco, Cal.

Louis A. Hartcorn, AerM 2/c, can be reached at the following address: Staff, Com Marianas, Box 12, c/o FPO, San Francisco, Cal. Louis' home address is 32 Main street, Chatham, New York.

Ens. Warren Helberg whose home address is 5322 Maffitt avenue, St. Louis 12, Mo., gives the

following military address: Electronics Lab., Navy 128, c/o FPO, San Francisco, Cal.

Lt. Wm. H. Hellwege ex-'44 is with the 1133rd Engr. Combat Gp. as Personnel Officer stationed at Manila, P.I. Bill writes that the Japs did a thorough job of destroying Manila. He has met Lt. Haleski ex-'44 who has been stationed in New Guinea for the past 18 months and is now in Manila. He also writes that Lt. Don West '43 and Lt. Shipman '43 are in the Manila area as is Fred Kibler '43 who is in the General Engineering District Headquarters in Manila. Capt. John Weidy '43 is adjutant in the 1314 General Service Regiment. Capt. Robt. Silhavy '41, former PiKA, who was captured by the Japanese at the fall of Corregidor, has been released and arrived in the Manila area the 19th of Sept. Bob is on his way back to the States. William writes that he hopes to be back at MSM to resume his studies next September.

William P. Henne and R. T. Lohmann of 200 Monroe street, Rochester, Pa., visited the campus on Dec. 27. Both are connected with Koppers Company, Inc.

Lt. Wm. E. Howard ex-'44 visited the campus on Oct. 8. Bill has been overseas in the European theater and is now back in the States. His home address is 5339 Nottingham avenue, St. Louis, Mo.

Joe E. Jenkins is living at 1485 W. 114th St., Cleveland 2, Ohio, where he is employed by the National Advisory Committee for Aeronautics.

Ray M. Knutson ex-'44, former student of MSM, is the author of an article published in the Mining Congress Journal for May 1945, entitled, "Coeur D'Alene Mines Yield Billion Dollars." Ray is geologist for the Bunker Hill & Sullivan Mining and Concentration Company at Kellogg, Idaho. This article has attracted considerable attention in the Pacific Northwest and will be included in the 1945 bulletin of the Idaho Inspector of Mines. Twenty thousand reprints of the article have been ordered for publicity purposes.

Ens. Warren L. Larson is stationed at the Navy Yard in Boston, Mass. He is living at 17 Marlboro street, Boston 16, Mass. Warren writes that he has seen two miners recently: Roger Moeller aboard a destroyer and Richard Ollis, who is at MIT. Warren states that he is enjoying his work very much and is working in the shop section of the navy yard and gaining metallurgical experience of value. He attended a foundry conference in Washington Naval Gun Factory and also visited the Naval Research Laboratory. He plans to attend another conference to be given in November in Charleston, South Carolina.

Robert Kick is living at 2080 Auburn avenue, Dayton 6, Ohio.

Lt. (jg) Donald G. LePere is now stationed at the Ammunition Depot, Fallbrook, Cal. His home is at 7509 West Main, Belleville, Ill.

William Magill whose home is at 1428 Bessie street, Cape Girardeau, Mo., is in the service somewhere in the Pacific.

Dick Mateer is entering Carnegie Institute of Technology in October to do some work on the correlation of magnetic properties with crystal orientation.

Lt. (jg) Jean McCaw Lloyd is stationed at the Norfolk Navy Yard at Norfolk, Va. Her home address is 305 Fauquier street, Portsmouth, Va.

Robert W. Mellis visited the campus on Oct. 1. Bob has just been discharged from the navy. His home address is 7354 Country Club drive, St. Louis 21, Mo.

1st Lt. Robert E. Murphy is now on duty in Shanghai, China. Bob is with the 3198 Sig. Sv. Bn., APO 290, c/o PM, New York, N.Y. Bob writes that he has seen Fred Nevin '44, who is with an Engineer section of the Shanghai Station Command and was with Fred at Kanchara, India, Kunming, China and Shanghai. Another Miner he has met is Kung-Pin Wang '42; and also Lester Moeller ex-'44, who is part of the Pipe Line Engineer Section that laid and operated the pipe line along the Burma road. Several of the graduates of the class of '43 were along the Burma and Ledo road. Bob writes that he has seen India, Burma and China, has been mixed up in a couple of Chinese rebellions but lost nothing except a few jeep windshields.

He has flown all over China and India and is looking forward to being home for the big St. Pat's in the spring of '47.

Peter Mushovic has moved from Dayton, O., to 335 Durfield, Greenfield, Mass.

Sgt. George J. Miller ex-44 is with the Engineer Administration Section, Hq. 7th Army, Western Military District, APO 758, c/o PM, New York, N.Y. George writes sending a contribution to the Johnny Rayl Memorial fund. George states he spent a fine vacation on the famed Riviera at Nice, France, and is now taking some courses offered by the army at Heidelberg University in Germany. He has recently seen three Miners: Lt. Kenneth Mooney '43, Lt. Enos Key '43 and Capt. Kenneth Schowalter '42.

Calvin E. Moeller and his brother Roger Davis are both in the U.S. Navy. S1/c Calvin gives his address as Sec. R 3-3, Bar. 161, Ser. School Comd., USNTS, Great Lakes, Ill. Roger Davis is an ensign aboard the USS Leary (DD 879), c/o FPO, New York, N.Y. Their home address is 838w W. 47th street, Oklahoma City, Oklahoma.

Lt. Robert E. Murphy is with the 3198 Signal Service Battalion, APO 290, c/o PM, New York, N.Y. Bob writes expecting to be shipped to Shanghai, China, soon to serve in the evacuation port of the Japanese forces and the Port of Embarkation for the return of American forces. He has been stationed in Kunming, China for the past several months. Bob is contemplating returning to school for additional study after discharge.

B/2 Peter Mushovic is now stationed at A-60, USMSTS, Brooklyn, N.Y.

Ralph E. Nuelle is living at 4949 Devonshire, St. Louis 9, Mo.

Lt. (jg) Francis S. Nelson, who is on the USS Rooks (DD804) can be reached through his home address which is 421 S. Colorado Ave., Kansas City 1, Mo.

Alan P. Ploesser is in the navy stationed at the USNTC at Great Lakes, Ill. He is connected with the Ship's Company.

Ens. Albert W. Presnell is now with the 29th NCB, c/o FPO, San Francisco, Cal. His home address is 1428 Hazelwood, Los Angeles, Cal.

S1/c Allan S. Reichert is on the USS LSMR 407, c/o FPO San Francisco, Cal. His home address is 5086 Waterman avenue, St. Louis 8, Mo.

Robert W. Roos has moved from Rochester, Pa., and is now living at 160 St. John's place, Brooklyn 17, N.Y.

Ens. Kenneth E. Rudert gives his military address as USS LSM 473, c/o FPO, San Francisco, Cal. Kenneth's home address is 831 No. Sprigg street, Cape Girardeau, Mo.

Jean Ronat whose home is 3127 Norwood, St. Louis, Mo., is in the Pacific, according to word received from his father.

Lincoln A. Sanders is living at 1719 S. Bronson, Los Angeles, Cal.

T/5 Robert E. Setchfield is now with the 2765 Engr. Base Photomapping Company, APO 887, c/o PM, New York, N.Y.

T/5 Sanford L. Simons gives his address as S.E.D., Box 180, Santa Fe, New Mexico.

Lt. Donald S. Smith visited the campus on Sept. 27. Donald is with Co. B, 1288 Engineer C Bn., Camp Swift, Tex. His home address is Salem, Mo. He has been overseas since December 1944, going first to England and then landed in France and participated in the battle of central Europe. Among other things, his unit put up a 1500 ft. floating Bailey bridge across the Rhine while serving with the 1288 Engineer Combat battalion.

Edward M. Schultz is living at 4881a Penrose street, St. Louis 15, Mo.

Glenn L. Staley Jr. writes that his military address is USNAB Navy No. 939, Hut No. 166, c/o FPO, San Francisco, Cal. His home address is 4434 So. 37th street, St. Louis, Mo. Glenn received the August-September issue of the Alumnus and enjoyed it very much and hopes the Alumni Association will "... keep 'em coming ..."

John Stegner visited the campus on Dec. 3. Fohn is process engineer with General Motors at Dayton, Ohio. His home address is 39 West

Herman, Dayton.

George Tatoian is now in the army being with Co. M, 1st Ordnance Tay Reg., ASFTC ATG, Aberdeen, Md.

Francis R. Walsh has been discharged from the army and is now living at his home at 6735a Mitchell avenue, St. Louis, Mo. Francis visited the campus on Dec. 3.

Lt. George H. Wagner ex-'44 is now with the 85th Engr. Pon. Bridge Co., Camp Swift, Tex.

Pvt. E. A. Weinel is in the 1576th Engr. Photomap Pl., APO 75, c/o PM, San Francisco, California.

Richard Wheat is a radar officer aboard a destroyer. His address is Robert K. Huntington, DD 781 c/o FPO San Francisco, Cal.

S/Sgt. Robert L. White ex-44 is in H & S Co., 322 Engr. Combat Bn., APO 445, c/o PM, San Francisco, Cal. His home is at 310 Chestnut avenue, Webster Groves 19, Mo.

Ens. David A. Wicker is on the USS Hobby, APO 95, c/o FPO San Francisco, Cal. His home address is at 4209 W. 16th street, Little Rock, Ark.

1945

Roy Henderson Boyd is an engineer with the U.S. Reclamation Service. His address is 1411 Fillmore street, Topeka, Kan.

Lt. Roy H. Dunham ex-'45 visited the campus on Sept. 25. Roy has just returned from 7 months overseas, having gone into Italy in December, 1944. He is now stationed in the United States. He was enroute to Jefferson Barracks where he expects to receive a discharge. Roy was married in Carthage, Mo., on March 19, 1944, to Helen Wagner. He is planning to bring his wife to Rolla and resume his school work at the beginning of the school semester.

Pvt. Leon Eriv is now in Co. C, 26th Bn., 3rd Regt., IRTC, Fort McClellan, Ala.

Pfc. Arthur R. Feinburg ex-'45 is in Co. A, 129th Abn. Engr. Bn., APO 333, Camp Mackall, N.C. His home is at 114 Sewall avenue, Brookline 46, Mass.

Cadet James F. Fraser is in Co. G-1, West Point, New York.

Lt. Gilbert H. LaPiere ex-'45 writes from Okinawa that he hopes to be home for Christmas and take up his studies at MSM again possibly at the beginning of the spring semester.

Dwight Lewis ex-'45 writes from Nagano, Japan, telling of his experiences while in Belgium, Luxembourg, Czechoslovakia and later in Japan. Dwight plans to come back to Rolla when discharged to resume his studies.

Gene K. McDowell is now with the Battelle Memorial Institute, 505 King avenue, Columbus, Ohio and is living at 364 King avenue, Columbus, Ohio.

Osborne Milton is living at 850 Clermont St., Denver 7, Colo.

Jack Ozawa is employed in the research and development laboratories of the Atlantic Refining Co. at Philadelphia, Pa. Jack is living at the Central YMCA, Room 348X, 1421 Arch St., Philadelphia 2, Pa.

Robert Rankin was promoted to the Chief Engineer's Office as AFE—Estimator, with the St. Louis Southwestern Railway Lines. His home address is Post Office Box 611 and business address is Chief Engineer's Office, 426 Spring street, Tyler, Tex.

Robert L. Ray ex-'45 writes from Yokosuka, Japan, regarding the possibility of doing graduate work after discharge from the army. Bob completed two years at MSM and then withdrew under the Navy V-12 program and completed work for his degree in metallurgy at the University of Illinois. He wishes to finish work for his Master's degree at MSM following discharge. Bob writes that he has seen many Miners in his military service and also that he enjoys the Alumnus very much.

Lt. Robert M. Rock ex-45 gives his address as 968 Engr. Maint. Co., APO 902, c/o PM, San Francisco. Robert writes that he, Lt. Ken W. Schoenber '44 and Lt. Sam Lyle ex-'44 are on Okinawa. Robert also writes that he has seen Lt. Russ Frame ex-'44, who is in the U.S. Marines.

Fred W. Schmitz is living at 918 S. Center street, Terre Haute, Ind.

Robert F. Schmidt gives his address as Box 421, YMCA, Fort Wayne, Ind.

Earl M. Shank visited the campus in early November. Earl is with the Aluminum Co. of America in the Development Laboratory at 3300 Missouri street, East St. Louis, Ill. His home address is 535 No. 12th St., East St. Louis, Ill.

Forrest O. Sisk is living at the YMCA at 3108 N. Grand Blvd., St. Louis 7, Mo. Jack is working for the Mallinckrodt Chemical Co.

B. J. Sparlin is living at 719 College avenue, Morgantown, West Va. Bernard writes that he has three months leave of absence from Westinghouse to help with teaching at the University of West Virginia where he is teaching electronic lab, telephone lab, electrical measurements lab and A.C. circuits lab. Before going there he was working in a D.C. motor design department.

Kor Uyetake is with the Hayden Coal Co., Box W, Haybro, Colo. Kor sends his alumni dues and writes "I can't tell you how much I look forward to receiving the MSM Alumnus."

James W. Ferry Jr. ex-'45 was on the campus on Oct. 30. Jim was enroute to Skidmore, Tex., where he will remain until Jan. 28 when he expects to enroll at MSM and complete the work required for his degree. He is on terminal leave from the Army.

H. F. Webers is living at 5152a Eichelberger, St. Louis 9, Mo.

Hackman C. S. Yee visited the campus on Nov. 30. Hackman is living at 3514 Olive St., St. Louis, Mo.

Carl B. Yoder is living at 475 Cedar street, St. Paul 2, Minn.

1946

Lt. Robert L. Barmeier ex-'46 visited the campus on Sept. 27. Bob had finished the Officers Candidate School and was enroute overseas to join the occupation forces in Japan. His home address is 5436 Holly Hills avenue, St. Louis, Mo.

A. Michael Deichmann ex-'46 visited the campus on Oct. 12. Mike is in the Merchant Marine. His home address is 324 Hawthorne avenue, Webster Groves, Mo.

Roy V. Denton ex-'46 is planning to return to MSM. His home address is 1430 Monroe avenue, Joplin, Mo.

1st Lt. Robert E. Fischer ex-'46 has been discharged from military service and is now at the home of his parents, Mr. and Mrs. E. A. Fischer, 4955 Leahy avenue, St. Louis. He served overseas as a navigator in the Italy-based 15th Air Force, participating in 51 sorties against the enemy. He has been awarded the Air Medal with three Oak Leaf Clusters and wears six bronze battle stars on his ETO ribbon.

Ens. Robert G. Meiners ex-'46 gives his home address as 7349 Huntington drive, St. Louis 21, Mo. He is stationed in the NATB, Bldg. 679, Pensacola, Fla.

Sgt. Donald W. Smith ex-'46 has been discharged from the army and is now living at his home at No. 4 Vichy road, Rolla. Donald expects to return to MSM and finish his education with the beginning of the spring semester.

1947

Lt. Alfred E. Copeland ex-'47 is now stationed at CCOM, Box 652, AAAF, Alamogordo, New Mex. His home is at 210 Walnut street, Rich Hill, Mo.

Ens. Robert C. Farley ex-'47 is on the USS LST 847, c/o Fleet Post Office, San Francisco, Cal. Robert spent a short leave with his wife in St. Louis in October.

Pvt. Richard J. Lane ex-47 gives his present address as Co. A, 1546th SCU, West Virginia University, Morgantown, W.Va. His home address is 310 College avenue, Princeton, Mo.

Wilbur F. Quevreaux ex-'47 visited the campus on Oct. 4. Wilbur is in the navy and expects to return to MSM to finish his education following discharge. His home address is 74 No. Gore avenue, Webster Groves, Mo.

Pvt. John G. Reilly Jr. ex-'47 is attached to Co. A, 80th Repl. Draft, USMC, FPO, San Francisco, Cal. His home is Apdo. 3, Pachuca, Hidalgo, Mexico.

1948

Pvt. Thomas K. Milligan ex-'48 is in Casual Company, No. 48, APO 21826, c/o PM, San Francisco, Cal.