



21 Feb 1964

The Missouri Miner, February 21, 1964

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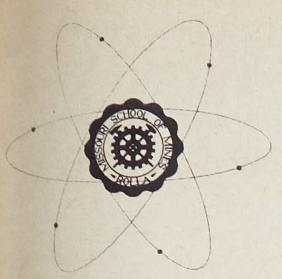
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SM swimmers have
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The Missouri MINER

MISSOURI SCHOOL OF MINES AND METALLURGY

VOLUME 50

FRIDAY, FEBRUARY 21, 1964

NUMBER 17

Key Chosen Head Basketball Coach

"We Will do Better" Pledges Key



M. U. professor explains European situation.

McGrew Tells Students Of Contemporary Europe

At 7:00 p.m. Tuesday evening, February 11th, Professor R. E. McGrew, chairman of the Department of History at the University of Missouri, delivered an hour long lecture concerning "U.S. and Western Europe" to the Military Science IV Class which assembled in the Student Union.

In his lecture, Professor McGrew traced the reconstruction of Europe out of the chaos and destruction which followed World War II and into the nuclear age of today. Along with this growth Western Europe has developed a prestige and unity, which, when exerted in the arena of world politics, will prove to be a forceful and effective voice.

Professor McGrew discussed the division of Europe into two strongholds — free Europe and Communist Europe. Free Europe, in turn, is subdivided into two parts consisting of those countries which belong to the economic

community and those countries which do not belong to the economic community. The absence of England from this economic community reflects the general tendency in Western Europe to regard the Island as a mere echo of U.S. policies. This exclusion of England from the Common Market has thrown the bulk of European leadership to France.

It was also mentioned by the

(Continued on Page 3)

"We will make an energetic effort to contact all athletes who have the academic background required, and who are specifically interested in the fields Missouri School of Mines offers." These are the determined words of Billy Allen Key, the recently announced choice for the position of head MSM basketball mentor.

Key, former basketball and baseball coach of Harris Teachers College and now employed by the St. Louis Junior College District, said in a recorded MINER interview that the problem that all coaches have if they are not winning is their material.

"We will do better," continued the thirty-nine year old native of Davenport, Iowa, referring to future MSM ball clubs. "Frankly, it will take a little bit of time, but I think that everyone is aware of this. You just don't do this overnight!"

The official release from the school indicates that Key will assume the title of Associate Professor of Physical Education, instructing classes in P. E. and working with the ever-growing intramural program. At the St. Louis Junior College District, which is now in its second year of existence, he is chairman of the Physical Education Department, as well as being Assistant Dean of Student Activities (South

Campus).

Coaching since 1949, Key has held two college positions besides the present one and two high school coaching tasks. In his first seven years as a team director, he coached Wellsville, Missouri, basketball and baseball, and later the Monroe City, Missouri squads. In 1956, Key took a position with Harris Teachers in St. Louis and remained there as Assistant Dean of Men, Athletic Director, and basketball and baseball coach. Nicholls State College of Thibodaux, Louisiana, employed him

as basketball coach and Assistant Professor of the P. E. Department before the Junior College District was formed.

A peek at his composite win-loss record for the college squads shows that this man has the ability to weave his material into closely-knit units. One hundred and eight wins and only forty-eight losses is a record that many coaches would eye with envy. Key's total varsity coaching record stands at two-hundred and fifty-six victories as compared to

(Continued on Page 6)

Extent of MSM Housing Bill Poses Major Problem

The Housing Bill committee for the students met again this week. Because the committee was organized as a result of general student concern, follow up articles will be printed in the Miner to keep the students informed on the committee's progress.

The committee met with Dean Baker near the end of last semester and was offered an opportunity to submit to the school a suggested list of possible changes in the housing bill planned by the school.

The committee is clearly in favor of a housing bill. The members feel that it is becoming more necessary with each passing semester and every additional student that registers at MSM. Since many students are already living in inadequate housing facilities, steps should be taken to improve the type of housing that will be available to students. The landlords are reluctant and the students are unable to remedy the situation; the school must do it.

The purpose of changing the housing bill is to improve the housing situation in as fair a manner as possible. The commit-

tee feels that the bill will help mainly freshmen and sophomores. Freshmen need some assistance in adjusting to college life. If conditions can be improved, the step into college life could be made much easier.

But this presents another problem. Should upperclassmen be required to observe the same housing rules? No decision has yet been reached on this issue; the final result is likely to be a compromised special section for upperclassmen.

Engr. Rates 1st In Recent Study Of Job Market

Engineering continues to be the most promising field for the young college graduate, according to a recent study of the job market by the federal government. The best prospects are in the electrical, aeronautical, ceramic, and chemical engineering areas, continued the report. More than half of the current openings are with manufacturing industries.

The current average beginning salaries for graduates with a B. S. degree and no experience is \$6,925. With a Master's degree, one can expect to start at about \$8,400, while with a Ph. D. starting salaries are currently between \$9,700 and \$12,500 a year.

The report also noted that prospects are "excellent" for scientists in almost any field of science, but are by far the brightest for persons with a Ph. D.

Chemistry is currently the largest scientific field, with starting salaries averaging about \$6,300 for persons with a B. S.,

(Continued on Page 6)

MSM Hosts Conclave; Lyons Keynotes Banquet

Frank D. Lyons, an alumnus of MSM, will return to the campus to be principal speaker at the 18th National Conclave of Chi Epsilon to be held February 20-22 at the School. Lyons will deliver the principal address at the Conclave Convention Dinner to be held February 20 in the evening at the Student Union Ballroom. Chi Epsilon, the National Civil Engineering Honor Fraternity, has 58 national chapters, all of which will be represented at the Conclave.

Lyons, who became Director of Highways for Oklahoma in 1961, has spent his entire professional career in the highway engineering field. He began with the Missouri Highway Department as a rodman of a survey party prior to his being graduated from college in 1950. His experience with the Missouri Department covered various phases of highway engineering, including that of a construction inspector, resident engineer, preliminary bridge design, and survey and plans. At the time he resigned his position with the Missouri State Highway Department to become Director of Highways for Oklahoma, he was a Senior Engineer of Surveys and Plans Division.

Following executive sessions on February 19th, the Conclave will officially open February 20th at 4 p.m. in the School's Civil Engineering Building Auditorium. The same evening the Conclave Convention Dinner will be held with F. D. Lyons, Director of Highways for Oklahoma as principal speaker. Lyons is an alumnus

(Continued on Page 5)

St. Pat's Board Strives To Better Entertainment

This year's St. Pats should be one like MSM has never before seen. The St. Pat's board, as usual, will furnish great entertainment, but will be taking a trend towards more popular and well known entertainers.

The activities will get under way Friday afternoon with St. Pat and his party leading the procession out to Lion's Park for the traditional Beard contest, shillelagh contest, and other enjoyable events. As in previous years, the Blue Key Fraternity will give the winners of the Shillelagh contest tickets to both of the St. Pat dances. There will be two

prizes given for the small shillelaghs, and one for large shillelagh. Originality, workmanship, and general appearance, will be the main basis for the judging. The Beard contest will be judged as was announced in a previous issue of the MINER. The Friday night dance, which will this year be held at the Armory, will feature "Little Milton" from the Artisan Club in St. Louis.

The St. Pat's Parade will start Saturday morning at 10 o'clock with St. Pat leading it up Pine Street. This year's theme for the

(Continued on Page 5)

Material Science Building Soon to Be Reality at MSM

The planning for the new Material Science Building has become a reality with the signing of a St. Louis architectural firm, Froese, Maack and Becker. With this exception the expansion future still appears foggy, but it has been rumored that the new building will be constructed in the vacant lot between Jackling Gym and the Civil Engineering Building. Reliable sources have it that an approximate \$750,000 has been appropriated for the building and another \$750,000 might be forthcoming from the Federal Government.

It has also come to light that

(Continued on Page 7)

**SIGN UP NOW FOR
PROF. CHRISTIE'S
SEMINAR
SEE PAGE 8**

Miner Editorials

Open Letter to the New Basketball Coach

Dear Sir,

Welcome! Welcome to MSM and to the tough job you have ahead of you. Your confidence expressed when accepting this job is commendable. The path will be tough, but not impossible. Your comparative youth coupled with the winning tradition you bring with you should prove to be more than adequate for the task.

At this point let us assure you that the entire student body is behind you 100%. It is due to the expressed wishes of the students and administration that the entire athletic program, varsity and intramural, is being accelerated and accentuated. Feel free to call upon students and student organizations at any time for assistance and support.

MINER Staff
(On behalf of the student body)

Happiness Is

Happiness is getting served.
Happiness is a postponed test you weren't prepared for.
Happiness is 14 minutes of extra sleep.
Happiness is a late professor.
Happiness is money from home.
Happiness is one girl for home and one for school.
Happiness is an inexpensive textbook.
Happiness is finishing a term paper.
Happiness is finally being hired.
Happiness is avoiding the draft.
Happiness is a gas price-war.
Happiness is sleeping in class and not missing anything.
Happiness is enough hot water.
Happiness is growing a beard.
Happiness is seeing movies "For Adults Only."
Happiness is being ignored by the Dean of Students.
Happiness is a parking place.

Editor's Life Rough?

An editor knocked at the Pearly Gates,
His face was scared and cold,
He stood before the man of fate,
For admission to the fold.
"What have you done?" Saint Peter asked,
"To gain admission here?"
"I've been an editor, sir," he said,
"For many and many a year."
The Pearly Gates swung open wide,
Saint Peter touched the bell,
"Come in," he said, "and choose your harp,
You've had your share of hell."

—Anonymous



Free dance at Student Union draws large crowd Friday night.

"MSM Will Meet The Changing Age In Engineering"

Dean Merl Baker of MSM was the main speaker at a meeting Feb. 18 of the New York chapter of the School of Mines Alumni Association. His topic was "MSM Will Meet the Changing Age in Engineering Education."

In his speech, Dean Baker outlined plans for future development of the School of Mines. Pointing out that last year the school was the sixth largest institution in the nation in the production of B. S. engineering graduates, Dean Baker said that graduate enrollment and research are also increasing at much above the national average pace. He expressed hope for a new earth science laboratory for the school to parallel the Space Science Center Material Research Laboratory which is already assured.

Dean Baker referred briefly to the proposal to change the name of the school. "The official name has always been the University of Missouri School of Mines and Metallurgy," he said, "but the briefer 'Missouri School of Mines' has always been more popular," which has been borne out by an informal survey taken of the letters addressed to his office. "Whatever the curators decide about the name change, MSM will probably continue to be the popular name," he said.

Also attending the New York meeting were a group of School of Mines faculty members who are in New York attending the annual meeting of the American Institute of Mining and Metallurgical Engineers, and Francis Edwards, executive secretary of the School of Mines Alumni Association.

Letter to the Editor

Editor:

I have just one question to ask the Miner staff. Why the complete absence of articles and pictures about this year's Military Ball? I think this important school event deserves adequate coverage in the Miner, the student's newspaper.

Leonard Kirberg

"35 Men Lost" Registrar

The following people are requested to go to the Registrar's Office and give their local address.

Ahmed, Kabir UD-Din
Ballman, Edward A., Jr.
Boettcher, Glenn D.
Bridgegroom, William E.
Brueckmann, Michael A.
Chott, Joe Robert
Chu, Gordon Pu Kong
Copenhaver, Roger L.
Daniel, John F.
Dawbarn, John Alma
Fay, David Warren
Grant, Daniel Angus
Hallock, Gray Barton
Heeger, Dennis Melvin
Hessler, George R.
Holtgreve, James Clark
Horn, John W.
Kadlec, Joseph Paul
Matthews, Robert L.
McVay, Gary Lee
Metha, Harendrakumar R.
Mork, Dean Albert
Morshedi, Abdollah
Musgrove, Richard Lee
Newell, George T.
Ohms, Edward J.
Owens, Paul Thomas
Parikh, Bipin R.
Patel, Chandrakant C.
Schuch, Joseph G.
Tafreshi, Manouchehr M.
Vyas, Ssyam Sunder
Watson, Jesse L.
White, Clifford H., Jr.
Young, Lawrence M.

Thousands Enroll, Public Universities Bursting at Seams

TIME Magazine announced that the U. S. Office of Education revealed that college enrollment has broken all records for the twelfth straight year. 2,140 colleges and universities now enroll 4,529,000 degree-seeking students, up 7.7% over last year and more than double the total in 1951.

Next year the number of 18-year-olds in the U. S. will jump by about 20%. By 1970 this population bulge may well result in 7,000,000 collegians, the magazine continues. After that will come a striking multiplier effect. Roughly 40% of Americans aged 18 to 21 are now pursuing higher education as against 25% in 1951. Since today's collegians will aim to send their children to college, the 1980 enrollment may hit 9,000,000.

TIME reports that now the heat is on public universities. Because most private campuses refuse to expand much, public campuses now enroll 64% of all collegians, compared to 50% a decade ago. The big schools keep getting bigger — and now include some giants.

NOTICE!

SENIOR LIFE SAVING — W. S. I.

Begins Feb. 25, 4:00 P. M., Pool

Do you desire
to take course?

Rolla address

Name

Parts I - II W. S. I.

Requirements, Senior Life Saving
in good standing. Begins after
Senior course.

Name

Rolla address

Turn in to Coach Van Nostrand
Athletic Office

NOTICE!

BRIDGE LESSONS!

Interested in bridge? Don't know anything about the game or want to learn more? It can be arranged. The Student Union is sponsoring a series of bridge lessons for those who have or have not the knowledge of the game.

Beginners (no knowledge)
Meets Thurs., Feb. 27,
7:00 p. m.
Intermediate
Meets Wed., Feb. 26,
7:15 p. m.

Check Student Union bulletin board for details.

THE MISSOURI MINER
MISSOURI SCHOOL OF MINES AND METALLURGY



THE MISSOURI MINER is the official publication of the students of the Missouri School of Mines and Metallurgy. It is published at Rolla, Mo., every Friday during the school year. Entered as second class matter February 8, 1945, at the Post Office at Rolla, Mo., under the Act of March 3, 1879.

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Prof. Gerig: He Leads a Life Full of Instruction

This week the MINER interviews Professor Frank A. Gerig, Associate Professor of Civil Engineering.

He is a graduate of the U.S. Military Academy at West Point; a graduate of Command and General Staff College, Ft. Leavenworth, Kansas; and the Engineer Officers Advanced Course, Ft. Belvoir, Virginia. Professor Gerig received his Master's Degree from the California Institute of Technology, Pasadena, California. He has served in the Far East, Europe, Korea, and the Pentagon.

Professor Gerig's teaching experience includes four years at the U.S. Military Academy, one year at Ft. Belvoir, and three years as Associate Professor of Civil En-

gineering at MSM.

After having traveled extensively, you chose to settle in mid-Missouri. What do you consider the relative merits of this locale?

First of all, I like the people of mid-Missouri. In general they are honest, hard working, and above all else, have an independent spirit. I admire self-reliance and the ability to tackle a job and finish it, no matter how complex. Also, Missouri has a great wealth of natural and other resources still to be developed, and participating in this development by teaching students who will be accomplishing this during the next half-century gives me personal satisfaction. Our climate, not too warm in the summer, and



PROF. GERIG

not too cold in the winter, is ideal. Add to these factors the opportunity to be a member of the faculty of one of the largest and most successful Civil Engineering Departments in the country and you can see why I like Rolla.

Do you think students learn more under an enforced study system such as that at the United States Military Academy at West Point than at a college of this type?

Don't get the idea that cadets always study during study hours. We could usually find something else to do when study palled. But we could not forget two things: we were expected to know the lesson assignment the next day when we went to class (the professor would clarify the more difficult points); and we were examined and graded each day on that day's assignment. This system insured a thorough grounding in the fundamentals of each subject. The lever that insured compliance was the fact that failure of any one subject resulted in dismissal from the Academy.

How would you rate the quality of instruction at MSM as opposed to other engineering schools such as Cal Tech?

I took only one undergraduate

course at Cal Tech so I feel qualified to compare the schools only on the graduate level. I feel that most of our graduate courses are on a very high plane. An exception is made for those cases in which we lack adequate equipment to support the course. Equipment is expensive and until we can obtain funds for its purchase, I doubt that we can be as successful as we would like to be. The performance of our B.S. graduates shows the high standard of the undergraduate program. To keep it at this high level requires continuing effort in review of curricula and of courses in order to eliminate that which is no longer useful or can be covered briefly as background material only. In our urgent efforts to improve the graduate field we must remember that the source of graduate students is the undergraduate; that if we downgrade undergraduate teaching we hurt both graduate and undergraduate. Don't misunderstand me. Having participated in research programs costing millions of dollars I know the value and the allure of research and graduate work. But to be successful we must emphasize both, not permitting either to suffer.

As a graduate of West Point, what do you think of the ROTC program at MSM?

It is the finest ROTC program in the country. As a matter of fact, before I ever saw MSM, I had been impressed by the fine performance of officers in the Army who had graduated here. The advanced training in ROTC leads to the wonderful opportunity to see the world and to gain invaluable experience both technically and in supervising and leading men. The program of instruction is conducted by an outstanding group of Army officers, offering a rare opportunity to those who wish to make the Army a career, as well as for those who wish to learn while

fulfilling their military obligations.

What do you consider the basic fault in engineering instruction? How can it be corrected?

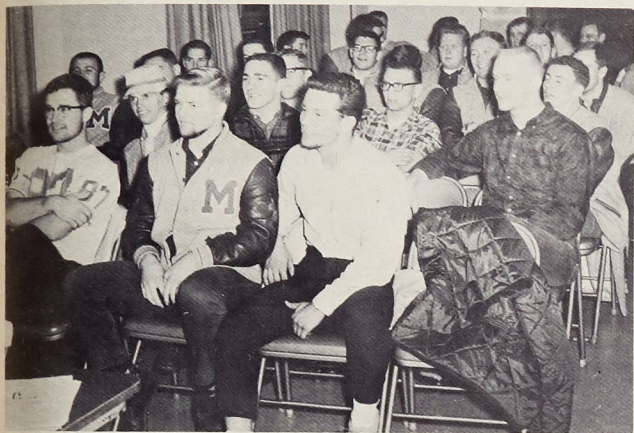
Simply, there isn't enough time in a four year program for a potential engineer to gain the knowledge that will be needed. Specific shortcomings come to mind. One is the lack of adequate study in the humanities and social studies areas. An Engineer must deal with persons from many walks of life. To do so, he needs a broad knowledge of economics, history, and literature, and he must be able to speak and write effectively. He certainly needs the technical knowledge but he will not go very far unless he learns more about these other subjects. Another shortcoming is that although we cover in classwork the sciences as a necessary background to engineering we do not have time in a four year course for even a minimally adequate coverage of the "Art of Engineering." As a result, we have less than complete success in some cases because of lack of broadness of vision, or too-early specialization by taking most of the undergraduate elective courses in only one field. A recent survey indicated that for the next several years there will be a greatly increased need for engineers who have studied the arts as well as the science of engineering. One solution to the shortage of time, which is being used by a well-known engineering school, is to require five years for completion of undergraduate work for a Bachelor's Degree in engineering. This has obvious disadvantages when a student can attend another school and obtain a Master's Degree in five years. Another school also does not grant an engineering degree at the end of four years but awards a Bachelor's and Master's degree after five years of study. A third solution, and one often used by such

(Continued on Page 4)

M-Club Holds Meeting For Election of Officers

The MSM varsity letterman's club held a business meeting on February 13 for purpose of elect-

were the following: Tony Jatcko, vice-president; Ralph Farber, treasurer; Dalton Welch, secre-



ing spring officers. Don Bacich, a football letterman, was elected for his second successive term as president. Other elected officers

tary; Gary Koch, publicity director; Jim DeBolt and Gary Couse, pledgemasters.

Past athletes of the month were also selected. For November, Steve Ombalski was elected for his outstanding services in football. Ralph Farber and Marty Howard were elected for December and January, respectively, for their standout performances in basketball for MSM.

Several recruiting projects are now being studied and planned by the M-club to inform high school athletes about MSM's revised and improved athletic system.

Lebanon Students Attend Digital Computer Session

A selected group of Lebanon High School students with their teachers attended a special workshop on digital computer systems at the Computer Center of MSM at 10 A. M., Saturday, February 15. Prof. Ralph Lee, director of the center, announced.

At the workshop the students and their teachers were introduced to modern computational methods, and will learn how to program digital computer systems.

After a lecture on programming by Professor Lee, the group was given the opportunity to write their own programs and to run them on the computer. Each student solved two or more problems at the workshop. Students may later send problems to the computer center, where they will be solved and the results mailed to them.

This was the Lebanon group's second visit to the computer center. Lebanon High School is one of three area high schools which have taken advantage of the opportunity for computer instruction by the School of Mines.

M. U. PROF. SPEAKS HERE

(Continued From Page 1)

professor that as Western Europe becomes a major power in the world, it will serve as a buffer between direct East-West tensions.

At the conclusion of the lecture, a question and answer period was held, proving interesting and informative to all in attendance.

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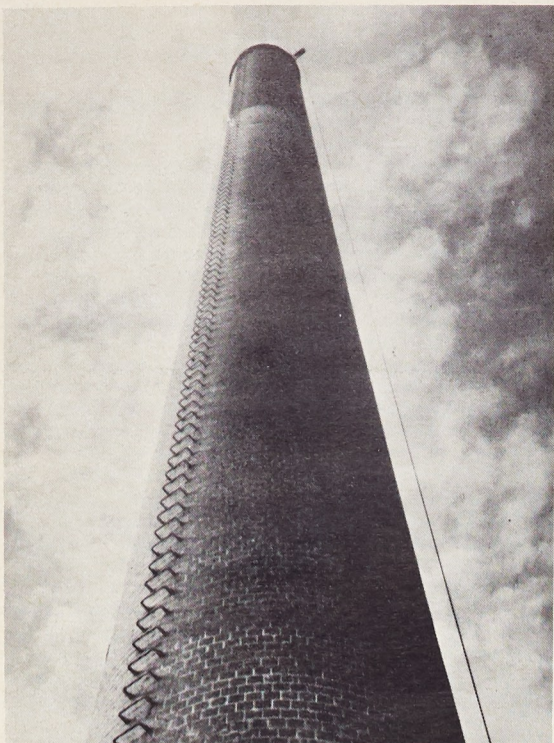


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Sunday Matinee
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MSM's Sky-Touching Smokestack.

Hot Air on Increase! Power Plant Responsible

Hot air in circulation at MSM has shown a vast increase in recent years. Discounting the adjacent Mathematics and M. E. departments the total steam generating capacity was about eight thousand pounds per hour by 1946. At this time, two new boilers (and several new teachers) were added bringing the total output up to thirty-six thousand pounds per hour. Because of MSM's growth, a new boiler was added in 1958 raising the total output to seventy-three thousand pounds per hour. With the already completed construction and that planned for the future, the system of boilers established in 1958 would not be adequate to hold this large a load.

Boiler Has Superheater

A new addition was added to the present power plant to handle the increased load. It consists of a new section of building, a smoke stack, and a boiler. The boiler costs \$127,010 and has an output capacity of fifty thousand pounds per hour. This is the first boiler to have a superheater whose purpose is to minimize erosion from the water within the turbo-generator. The present boiler efficiency is 85%+. The total cost of the smoke stack and building addition was \$287,808.

Steam and Exhaust Used

The power plant uses the steam mainly for heating and uses the exhaust for generating electricity.

When used in this way, the boilers serve a double purpose and are therefore economical. When not much heat is needed, it is cheaper to buy the electricity.

The power plant is hoping to provide enough heat for the present with provisions made for future expansion.

Theta Tau Elects Officers; Holds Its Initiation

On January 12, 1964, Iota Chapter of Theta Tau Professional Engineering Fraternity held its initiation. The newly initiated brothers are: Dave Blume, Dale Brown, Jerry Davis, Mike Deelo, Craig Dunn, Roger Fanetti, Paul Gerhardt, Don Housh, Sam Hurt, Beau Jung, Bill Kirchoff, Norm Meyer, Bob Moxham, Pete Pulis, Dick Skinner, Sam Turall, and Bob Wheeler.

Theta Tau recently held its

election of officers for the spring semester of 1964. The newly elected officers are John Million, Regent; Bill Farrell, Vice-Regent; Bob Wheeler, Treasurer; Jim Bertelsmeyer, Scribe; Jerry Davis, Corresponding Secretary; Jim O'Bryant, Pledge Marshall; Richard Skinner, Inner Guard; and Mike Deelo, Outer Guard.

Theta Tau will hold a smoker at 7:00 P. M. on February 26 in the West Ballroom of the Student Union. Information sheets are available at the Student Union candy counter.

Africa, Middle East: Topics for Upcoming Lecture

Professor James Watts, Department of History, University of Missouri, will present a lecture on "Africa and the Middle East" at 7:00 P.M., Tuesday, February 25th, at the Missouri School of Mines and Metallurgy Student Union.

This lecture is the second in a series of four being sponsored by the Military Department at MSM for presentation to the Military Science IV Class in order to orient and familiarize the prospective Commissioned Officers with the role and relationship of the United States in world affairs. The one hour lecture will be followed by a question and answer period. Members of the faculty, students, and the general public are invited to attend.

Professor Watts will discuss the strategic and local importance of the African and Middle Eastern nations in their evolving struggle for independence and world recognition. He will show how the geographical locations and natural resources in countries in these areas attract the interest and concern of powerful nations. He will also cover the potential impact of changing political concepts and alignments, to include communist influences, in these countries on the world balance of power.

Professor Watts received his B. A. degree from the University of New York's College of Education at Oneonta, New York. He received his M.A. at the University of Missouri in 1960, and at present is completing work for a Ph.D. in American History at the University of Missouri. He is presently the Honors Instructor in American History at the University.

PROF. GERIG

(Continued From Page 3)

Successful engineers is continuing to study either privately or in night courses after receipt of the Bachelor's Degree. Although success has been achieved often in this way, there is the major disadvantage that it is much more difficult to learn an art this way than from a qualified faculty such as we have here at MSM. A student who can find some way to finance at least a fifth year of college study leading to a Master's Degree will find that he has a great advantage in the long run over the one who completes his studies with a B. S.

What about cheating?

Each student should realize, at least after the first year or two of college, that he is developing

habit patterns that will be ingrained for the rest of his life. Engineers have a good reputation as honorable men, and sooner or later one who cheats will find his career hampered or destroyed. Therefore, an intelligent student with self-respect and hope for better times in the future will not permit himself to cheat. The slightly better grade that he might get cannot outweigh the loss of self-respect and the loss of the respect of others. I realize that this is an idealistic view, but I can assure you from personal knowledge of several cases, that it is also practical. The faculty tries to prevent cheating but an organized assault on the subject can be successful only if the impetus comes from the student body, including each individual and each organization.

A TYPICALLY SNOWED MINER



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Taum Sauk Focused on In IEEE Banquet Talk

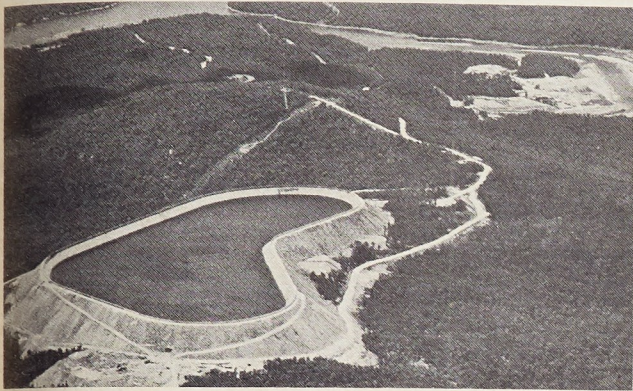
The MSM student branch of the Institute of Electrical and Electronics Engineers held their annual banquet in the Student Union on February 8. Mr. Harold Gove of Union Electric Company was the principal speaker. His subject was "Taum Sauk".

The annual banquet is the highlight of the year's technical and social activities of the local chapter. Professor G. G. Skitek served as Master of Ceremonies. The meeting was opened with an invocation by Prof. George McPherson. Musical entertainment was provided by several selections and group singing led by the Kappa Alpha Singers.

of the countryside near the Union Electric installation.

The student officers of the local chapter were introduced by Robert Uternaehrer, Chairman. They are Vice Chairman Glen Lowe, Secretary Henry Fisher, Treasurer Myron Gruber. Dr. R. D. Chenoweth serves as Counselor for the group.

Taum Sauk, internationally recognized power plant located in Ozark Highland country, has been recognized as "Engineering Wonder in Missouri, 1963". The selection was made by the Missouri Society of Professional Engineers board of directors, according to George W. F. Myers, P.E. St.



Aerial view of Taum Sauk.

Mr. Gove's talk described the construction and operation of the Union Electric Company's new hydro-electric project near Taum Sauk in Missouri. The talk was illustrated with slides and enlivened by Mr. Gove's humor and comments on interesting features

Louis, president of the Society.

This new electrical power plant is among the world's largest pumped-storage power generators. It is located in a scenic region of the Missouri Ozarks about 100 miles southwest of St. Louis, not far from Ironton.

It was built by Union Electric Company, St. Louis, at a cost of \$50,000,000. The plant adds 350,000 kilowatts of electricity to the company's system that serves two million people in the strategic center of America.

The plant was dedicated October 9, 1963 by Honorable John M. Dalton, Governor of Missouri, at a meeting attended by 500 industrial governmental leaders of this state.



Earning Money in Europe

JOBS IN EUROPE

Every registered student can get a job in Europe and receive a travel grant. Among thousands of jobs available are resort, sales, lifeguard and office work. No experience is necessary and wages range to \$400 monthly. For a complete prospectus, travel grant and job application returned airmail, send \$1 to Dept. F, American Student Information Service, 22 Ave. de la Liberte, Luxembourg City, Grand Duchy of Luxembourg.

Dr. Curtis L. Wilson, Dean Emeritus of MSM, will return to the campus Friday, February 21 to speak at the National Conclave. Dr. Wilson, who will speak on "The Blessing of Extravagance", will address the more than 120 national delegates and the host MSM chapter at the initiation banquet in the evening.

Dean Wilson is a member of the honor societies Tau Beta Pi (engineering), Phi Kappa Phi (scholarship), Sigma Xi (research), Sigma Gamma Epsilon (earth sciences), Pi Tau Sigma (mechanical engineering), Alpha Sigma Mu (metallurgy), Chi Epsilon (civil engineering) and Eta Kappa Nu (electrical engineering). He was a member of the Governor's Council on Higher Education and was also the first chairman of the Governor's Science Advisory Committee in Missouri, of which he is still a member.

Also on Friday evening February 21st, Dr. Merl Baker, Dean of the faculty of the University of

(Continued on Page 7)

ST. PAT'S

(Continued from page 1)
floats will be "Song Titles." The movie which was taken of last year's parade will be shown on Sunday at the Student Union along with the regular feature. After the parade St. Pat will proceed to the MSM football field for the traditional knighting ceremony.

Saturday night's Coronation Dance, which will also be held at the Armory, features the Drifters, Iram Thomas, Garnet Mimms and the Enchanters, and Little Johnny Taylor. Also during the evening St. Pat will crown his Queen of Love and Beauty, and the winners of the Float contest will be announced. Tickets will be on sale beginning March 1 and may be purchased from St. Pat's Board representatives or from various Rolla merchants.

St. Pat's buttons, hats, and sweatshirts may now be purchased from the St. Pat's Board members.

The Reviewer's Stand

"MOVE OVER DARLING"

Doris Day, long on the top ten player list in boxoffice barometer, and James Garner, rapidly climbing to popularity through "The Great Escape" and "The Thrill of It All," the latter a co-starring role with Miss Day which became one of the smash hits of 1963, now appear in another madcap comedy which is certain to repeat in audience appeal and the resultant sensational grosses. "Move Over, Darling," produced by Aaron Rosenberg and Martin Melcher with an hilarious screenplay by

UPTOWN THEATRE

MOVIES IN CINEMASCOPE
NOW SHOWING Feb. 20-25
Sunday Continuous from 1 p. m.
'Move Over Darling'
Doris Day & James Garner

STARTS WEDNESDAY,
Feb. 26 - Mar. 3
Shows at 7 and 9 p. m.
Admission:
Adults 75c - Children 35c
'Dr. Strangelove'

Peter Sellers & George C. Scott

RITZ THEATRE

MOVIES ON WIDE SCREEN
Fri., Sat. Feb. 21-22
Saturday Continuous from 1 p. m.
'Walk Like a Dragon'
Jack Lord & Nobu McCarthy
—PLUS—

'The Warrior and the Slave Girl'

A Cast of Thousands

Sun., Mon., Tues. Feb. 23-25
Sunday Continuous from 1 p. m.
'The Jayhawkers'

Jeff Chandler & Fess Parker
—PLUS—

'The Flying Fontaines'

Michael Callen & Evy Norlund

'A Weekend With Lulu'

Shirley Eaton & Bob Monkhouse
—PLUS—

'The Party Crashers'

Connie Stevens & Robert Driscoll

Hal Kanter and Jack Sher, is based on the 1940 Cary Grant-Irene Dunne hit, "My Favorite Wife." This new version is a constant delight, directed at a fast and furious pace by Michael Gordon and acted to the farcical hilt by the stars and the outstanding support players.

Just about the time James Garner goes before a judge to have his long missing wife, Doris Day, declared legally dead after

five years in order to marry Polly Bergen, Doris hurries to the honeymoon hotel, and the ensuing circumstances are interesting to say the least.

The ruggedly handsome Garner has never been funnier, and Miss Day, as the long lost wife, and Polly Bergen, as the sexy, hot-tempered, new bride, are perfectly contrasted types.

It will be shown at the Uptown Theater through February 25.



(Author of "Rally Round the Flag, Boys!" and "Barefoot Boy With Cheek.")

EVOL SPELLED BACKWARDS IS LOVE

They met. His heart leapt. "I love you!" he cried.

"Me too, hey!" she cried.

"Tell me," he cried, "are you a girl of expensive tastes?"

"No, hey," she cried. "I am a girl of simple tastes."

"Good," he cried, "for my cruel father sends me an allowance barely large enough to support life."

"Money does not matter to me," she cried. "My tastes are simple; my wants are few. Just take me riding in a long, new, yellow convertible and I am content."

"Goodbye," he cried, and ran away as fast as his little stumpy legs would carry him, for he had no yellow convertible, nor the money to buy one, nor the means to get the money—short of picking up his stingy father by the ankles and shaking him till his wallet fell out.



He knew he must forget this girl, but lying on his pallet at the dormitory, whimpering and moaning, he knew he could not.

At last an idea came to him: though he did not have the money to buy a convertible, perhaps he had enough to rent one!

Hope reborn, he rushed on his little stumpy legs (curious to tell, he was six feet tall, but all his life he suffered from little stumpy legs) he rushed, I say, to an automobile rental company and rented a yellow convertible for \$10 down plus ten cents a mile. Then, with many a laugh and cheer, he drove away to pick up the girl.

"Oh, bully!" she cried when she saw the car. "This suits my simple tastes to a 'T.' Come, let us speed over rolling highroads and through bosky dells."

Away they drove. All that day and night they drove and finally, tired but happy, they parked high on a wind-swept hill.

"Marlboro?" he said.

"Yum, yum," she said.

They lit their Marlboros. They puffed with deep contentment. "You know," he said, "you are like a Marlboro—clean and fresh and relaxing."

"Yes, I am clean and fresh and relaxing," she admitted. "But, all the same, there is a big difference between Marlboros and me, because I do not have an efficacious white Selectrate filter."

They laughed. They kissed. He screamed.

"What is it, hey?" she asked, her attention aroused.

"Look at the speedometer," he said. "We have driven 200 miles, and this car costs ten cents a mile, and I have only \$20 left."

"But that is exactly enough," she said.

"Yes," he said, "but we still have to drive home."

"Oh," she said. They fell into a profound gloom. He started the motor and backed out of the parking place.

"Hey, look!" she cried. "The speedometer doesn't move when you are backing up."

He looked. It was true. "Eureka!" he cried. "That solves my problem. I will drive home in reverse. Then no more miles will register on the speedometer and I will have enough money to pay!"

"I think that is a smashing idea," she said, and she was right. Because today our hero is in the county jail where food, clothing, and lodging are provided free of charge, and his allowance is piling up so fast that in two or three years he will have enough money to take his girl riding again.

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* * *

Marlboro Cigarettes, good as they are, should not be smoked backwards. We, the makers of Marlboro, most earnestly urge you to light only the tobacco end. Otherwise your smoking pleasure will be substantially diminished.

Clinton Jaycees Honor Doctor Day at Banquet

Delbert E. Day, 712 Berkshire Drive, Clinton, received the Clinton Jaycees' 1963 Distinguished Service Award at Thursday night's banquet honoring the Outstanding Young Man of 1963.

The DSA recipient is a Lieutenant in the Corps of Engineers, U. S. Army, assigned to the Waterways Experiment Station, Clinton, as a Ceramic Engineer. He is on leave, to fulfill his military obli-

tion, from his assistant professorship at the Missouri School of Mines. The Days have two children.

Dr. Day, who earned his Ph. D. in Ceramics Engineering at Penn. State University in 1961, has as an undergraduate and graduate student and as a professor exhibited exceptional leadership and achievement, both in his curricular and extra-curricular activities.

Born August 16, 1936 at Avon, Illinois, Day's accomplishments belie his youth: he received his Masters in Ceramic Engineering, Penn. State University, 1960, and his B. S. in Ceramics Engineering, Missouri School of Mines and Metallurgy, in 1958. He is a graduate of Springfield, Ill., High School Class of '54.

His college activities and honors include: membership in Tau Beta Pi, Phi Kappa Phi, Kappa Kappa Xi, Blue Key, leadership and

BILLY KEY; NEW COACH

(Continued From Page 1)

ninty-three defeats. In 1962 Harris, under the direction of Coach Key, swept the city championship, competing against Washington University, St. Louis University, and Concordia Seminary.

Although Key will not be bringing any of the "District" athletes with him, he accounts it to the fact that they are currently engaged in only an intramural program. He pointed out that they expect to start some intercollegiate sports in 2 or 3 years.

The effectiveness of his coaching techniques, including a man-to-man defense, is displayed by the 1962 rank of 14th in the NCAA Small College Best Defensive Team list. The 1962-63 loop produced the 14th best offensive team in the country. "We went from one extreme to the other."

When confronted with the situation at MSM, Coach Key commented, "We will all make a great effort to try to improve the program. In all of our discussions, it was made perfectly clear that there is no great pressure on the coaches or players, as far as winning or losing goes."

"Anyone that can dribble a basketball can play for the other state schools," replied Coach Key in regard to the high scholastic requirements at MSM, "but that's not true in the situation at MSM. They couldn't even get their foot in the door down there." He emphasized that this was no reflection on the other state schools, but that is just the way the situation exists. (Key obtained his B. S. in Education at Central Missouri State, his Masters at Washington U.)

In commenting on recruiting of athletes, Coach Key stressed that "the biggest particular selling point is in the fine institution at the Missouri School of Mines." He also continued on saying, "The one thing that I hope the school is able to do is to obtain better athletic facilities. I believe that this is one thing which is hurting the present program to a great extent."

Billy Key is married, and has a 17 year old daughter, who will be graduating from high school this year. The family plans to move to Rolla sometime during the summer with the MSM position taking effect around July 1.

"Mrs. Key, my daughter Carolyn, and I will be looking forward to being members of the community in Rolla, and the staff of MSM," added Key. "I will certainly do everything I possibly can to improve the program. I'm sure that I will get everyone's cooperation, and I feel very honored to have the opportunity."

ENGINEERING

(Continued From Page 1)

\$7,400 with a Masters's, and about \$10,200 with a Ph. D.

There is also an expanding need for physicists, astronomers, geophysicists, oceanographers, and biologists.

There will be a big rise in demand for mathematicians with Ph. D. degrees. Starting salaries for qualified personnel range up to \$16,000.

The report also indicated that job openings appear to be growing faster in the West and the South, than in the Northeast and Midwest.

scholarship organizations; he ranked first of 494 students in his graduating class; received Pittsburgh Plate Glass Fellowship 1959-1961; received A. P. Green Medal; received J. B. Arthur Scholarship 1956-1957. He received three highest ROTC honors: Chicago Tribune Award, Distinguished Graduate, Superior Cadet.

Curators Awards Given

Dr. Merl Baker, Dean of MSM, has announced the recipients of Curators Freshman Awards and Curators Freshman Scholarships for the coming 1964-1965 academic year. These recipients are now high school seniors who have been accepted as freshmen at the school following the completion of their high school work. They will major in one of the 15 degree areas offered in applied science, mathematics, or engineering at the school. MSM ranks 4th nationwide in the number of accredited undergraduate degrees offered in the engineering field.

The Curators Freshman Scholarship is equal to the incidental fees for the freshman year (\$115 per semester or \$230 for the academic year).

In addition to the Curators Freshman Scholarship, the University also awards Curators Freshman Awards to applicants who are selected on the basis of academic merit and need. The Curators Freshman Awards are of equal value to the Curators Freshman Scholarships, and to be

eligible, an applicant must be a Missouri resident, have graduated from a Missouri high school, rank in the top third of the class, and rank in the top third of statewide testing programs.

Tour Highlights Women's Tea

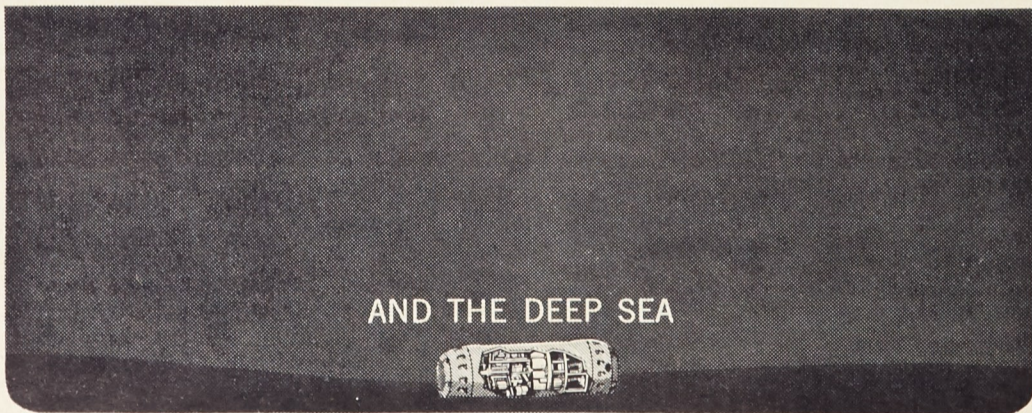
Tuesday, February 11, all women students were invited to a tea given by Mrs. Merl Baker and the Society of Women Engineers. Dean Baker was also present during the evening. One highlight of the evening was a tour of the newly redecorated Dean's Residence.

At that time the following eight women were pledged to SWE: Janet Bell, Pat Blair, Sue Crume, Gail Davidge, Elaine Devaney, Judy Kleinsorge, Madonna Kregel, and Vicki LaMure.

They will be initiated at a luncheon Saturday, February 22, at the Colonial Village.



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OUTER SPACE



AND THE DEEP SEA

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Such trailblazing projects command the best of managerial and scientific talent. That's why you'll find, throughout the Bell System, men with college training as diverse as the responsibilities they shoulder. Their backgrounds run the gamut from liberal arts and business courses to science or specialized engineering majors.

Admittedly, the work is demanding. It requires that unusual caliber of man who finds a greater satisfaction in challenge than in ready solution... who is eager to see his education yield dividends... who wants an immediate opportunity for leadership.

Men with this kind of impatience will discover the stimulation, welcome and rewards they seek in the telephone business.



BELL TELEPHONE COMPANIES

Given ROTC Concert Band Is Well Received by Miners

An over capacity crowd attended the winter concert presented by the ROTC Concert Band at the

Student Union Balroom last Tuesday night.

The ROTC band is directed by David Oakley and by the end of the 1964 spring semester will have presented more than 70 public performances, including performances on a national T.V. network, since it was reorganized late in 1960.

Band members from three local high schools, along with students and citizens of Rolla attended this performance.

Scholarship to Chem Engineer

Tom Hrstich, St. Louis, Mo., was presented the "American Institute of Chemical Engineers Junior Scholarship Award" at the February 12th meeting of the student chapter of the "American Institute of Chemical Engineers" (AIChE).

Hrstich is a member of Alpha Chi Sigma (Professional Chemical Engineering Fraternity), president of the student chapter of American Institute of Chemical Engineers, and a member of Tau Beta Pi, Phi Eta Sigma (Honorary Fraternity), and Delta Sigma Phi (Social Fraternity).

The scholarship award consists of a certificate issued by the AIChE, a two-year subscription to "Chemical Engineering Progress", a prepaid student membership in the AIChE and a student pin or lapel button.

The MSM student chapter also awarded a sophomore award to Mr. David S. Shimamoto for receiving the highest scholastic average during his freshman year. The award consists of a one year subscription to "Chemical Engineering Progress".

Shimamoto is a member of the Baptist Church; American Institute of Chemical Engineers (Treasurer); Alpha Chi Sigma (Professional Chemical Engineering Fraternity); Engineers Club; Independents; Intermural Manager; Intra-Coop Council (Treasurer); Phi Eta Sigma (Correspondent); and Track (Lettered).

Dames Hear Role of Wife

The first meeting for the second semester of the MSM University Dames will be held in the Student Union Ballroom at 7:30 p.m. on Thursday, February 27, 1964. Registration and payment of the \$1.00 dues will be two of the items on the agenda. The main feature of the evening will be a talk, followed by a question and answer period, given by Mr. Robert Gray of Detroit, Michigan. He is the Personnel Manager of General Motors and will be here at MSM conducting interviews.

His subject, one of interest to every Dame, will be "What Is Expected of an Engineer's Wife?"

The committee chairmen for the second semester have been selected and are as follows: Hostess, Pat Bryant; Courtesy, Judy Branch; Arts and Crafts, Casey Bailey; Newspaper, Sharon Lee; Scrapbook, Shirley Grimm; Program, Sandy Davis; Membership, LaJuana Craig.

MATERIAL SCIENCE BUILDING

(Continued From Page 1)

The new building will be a workshop for three departments, Physics, Ceramics, and Metallurgy. The new building, if it materializes, will certainly be a welcome improvement to the school.

Sigma Nu Elects New Commander

Tom Gaylord has become the new commander of Sigma Nu. He is a junior from Independence, Mo. majoring in physics. He is also president of Sigma Pi Sigma and is a member of, among other organizations, Tau Beta Pi, Blue Key, and Theta Tau. He succeeded Charlie Riggs.

Initiation was recently held for six who became members of Sigma Nu. They are Jack Munsey, Ken Krueger, Brunn Roysden, Dick Schrick, Jim Powers and Bob Hildendorf.

CHI EPSILON

(Continued From Page 5)

MSM, will be made an honorary member of Chi Epsilon.

All national officers and executive personnel will be present for the Conclave and they include: President Professor Marion B. Scott of the Civil Engineering Department of Purdue University; Vice-President Professor Warren B. Keith of the Civil Engineering Department of the University of Alabama; Secretary-Treasurer Dean John A. Focht of the University of Texas; Editor of the *Transit* (Official Chi Epsilon Publication) I. W. Santry, Jr., of Southern Methodist University; and the following district councillors: Mid-Atlantic Dis-

trict - Professor Paul Hartman of the Civil Engineering Department of City College of New York; Western District - Rodney P. Lundin of Chatsworth, California; Southwestern District - Professor Roger Lee Flanders of the Civil Engineering Department of Oklahoma State University; Midwestern District - Professor Gerald J. Caspary of the Civil Engineering Department of Michigan College of Mining and Technology; New England District - Professor Victor E. Scottron of the Civil Engineering Department of the University of Connecticut; and the Councillor Emeritus Harold T. Larsen of the American Society of Civil Engineers. Mr. Larsen lives in New York.



Our world-recognized trademark—"the P&WA eagle"—has been identified with progress in flight propulsion for almost four decades, spanning the evolution of power from yesterday's reciprocating engines to today's rockets. Tomorrow will find that same Pratt & Whitney Aircraft eagle carrying men and equipment to the moon and to even more distant reaches of outer space.

Engineering achievement of this magnitude is directly traceable to our conviction that basic and applied research is essential to healthy progress. Today's engineers at Pratt & Whitney Aircraft accept no limiting criteria. They are moving ahead in many directions to advance our programs in *energy conversion for every environment*.

Our progress on current programs is *exciting*, for it anticipates the challenges of tomorrow. We are working, for example, in such areas as advanced gas turbines... rocket engines... fuel cells... nuclear power—all opening up new avenues of exploration in every field of aerospace, marine and industrial power application.

The breadth of Pratt & Whitney Aircraft programs requires virtually *every technical talent*... requires ambitious young engineers and scientists who can contribute to our advances of the state of the art. Your degree? It can be a B.S., M.S. or Ph.D. in:

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Career boundaries with us can be further extended through a corporation-financed Graduate Education Program. For further information regarding opportunities at Pratt & Whitney Aircraft, consult your college placement officer—or—write to Mr. William L. Stoner, Engineering Department, Pratt & Whitney Aircraft, East Hartford 8, Connecticut.

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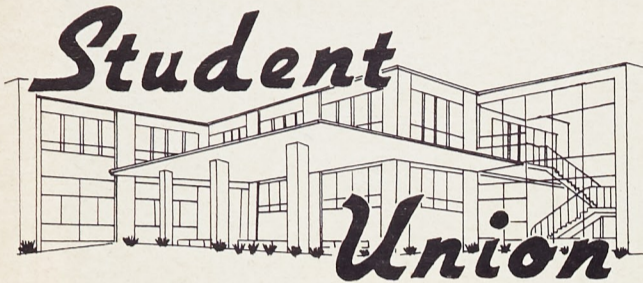
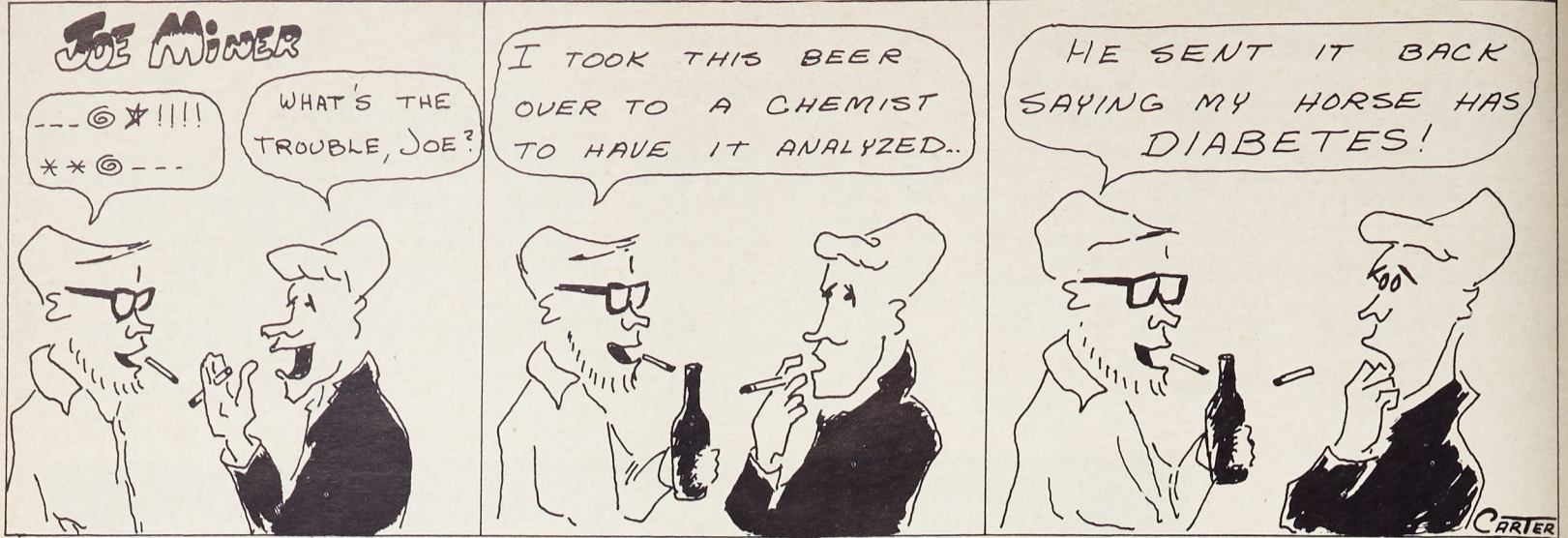


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Spring Finance Seminars for Seniors, Grads

During this spring semester MSM's Student Council will sponsor a series of seminars on personal finance and investments for seniors and graduate students. Attendance is voluntary since there will be no examinations or quizzes, and the deadline for enrollment is February 25. Cards for this purpose can be secured in the Registrar's office, at the Student Union information desk, or in room 103 of the Rolla Building.

Professor C. G. Christie, lecturer and monitor, will present the first seminar on Tuesday, February 25, from 6:45 p.m. to 8:00 p.m. in room 103 of the Rolla Building. Times and dates for ensuing lectures will be decided upon at a later date.

Designed to provide practical knowledge to Miners about ready to assume complete responsibility for their financial matters, the subjects under consideration will be "Spending and Borrowing," "How to Use Your Bank," "Saving Money and Outlets for Savings," "An Introduction to Investment Information," "Mutual Funds," "How to secure Investment Life Insurance," and "Estate Planning."

S. U. Presents Coffee Hour

The Student Union is sponsoring its second coffee hour of the year February 25, at 2:00 p.m. It will feature Capt. F. V. Cole, who will speak on Europe. His lecture will be supplemented with color slides of the picturesque continent. FREE COFFEE WILL BE SERVED!

Photo Display

The Student Union is presently showing a photo display in the music room. The display is sponsored by the MSM Photo Club. These photos were taken by the members of the club here at MSM.

Chess Tournament

The Student Union Chess Tournament will start play March 9. All those interested should check the Student Union Bulletin Board for details and sign up sheet before March 1.

Sunday Films

February 23, 1964

"Buccaneer" in color starring Yul Brynner, Charlton Heston, Charles Boyer, Clare Bloom, Inger Stevens, Henry Hull, and E. G. Marshall.

Events surrounding the Battle of New Orleans in the War of 1812. General Andrew Jackson's (Heston) dependence on the help of pirate Jean Lafitte (Brynner) is complicated by the Governor's daughter (Stevens), who professes to Lafitte but puts duty and loyalty to her father first. Huge panorama of one of the strangest and most colorful incidents of American history.

March 1, 1964

"Flower Drum Song" in color.

Ten MSM Faculty Members To Attend AIMME Meet

Ten members of the faculty at MSM are attending the annual meeting of the American Institute of Mining and Metallurgical Engineers in New York this week.

Also scheduled for the group was a meeting of the New York School of Mines alumni chapter on Tuesday, February 18, at which Dean Merl Baker was the main speaker. His topic was "MSM will Meet the Changing Age in Engineering Education."

The following are attending the AIMME meeting: Dr. D. W. Eppelsheimer, Dr. H. P. Leighly, Dr. H. R. Hanley, Prof. A. Legsdin, and Norbert Vermaut from the metallurgical engineering department; Dr. Ernest M. Spokes, Prof. R. L. Ash, and Dr. J. J. Scott from the mining engineering department; and Dr. G. B. Clark, associate director of the research center. Francis Edwards, alumni secretary, is also in attendance.

PUBLIC UTILITY NEEDS GRADUATING ENGINEERS

Illinois Power Company, at this time, has unusual job opportunities for graduating Electrical Engineers, Mechanical Engineers and Civil Engineers.

We are an investor-owned public utility which provides electricity and gas to about 1/4 of the geographic area of Illinois. Our headquarters are in Decatur, Illinois, a town of 80,000 population. To obtain more information about us, ask for a copy of "Career Opportunities at Illinois Power Company." It's at your Engineering Placement Office.

INTERVIEWS:

MARCH 5, 1964

SEE ENGINEERING PLACEMENT OFFICE FOR AN APPOINTMENT

An Equal Opportunity Employer

ILLINOIS POWER COMPANY
DECATUR, ILLINOIS

Louisville Easy Mark for Miner Swim Team; Season Total Now 4-3

By Wayne Laufer

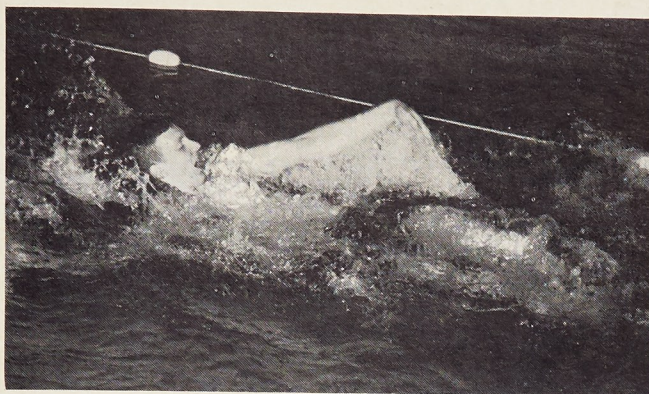
The Missouri School of Mines swimming team dropped a close match with Principia College at the MSM pool on February 17. The lead changed hands four times, but Principia won the last two events to assure a 56-39 Principia victory.

Norm Nuss again set an MSM mark, this time in the 160-yard individual medley. Nuss was the high point man for the Miners with 8 points. Keith led the squad with 8 points. Keith led the squad with 8 points. Keith led the squad with 8 points.

Terre Haute, Indiana, was the first stop on a two card road trip for the MSM swimmers. A top-ranking Indiana State, squad ripped through an eleven event card, taking eight of the scheduled swims. A final score of 63-32, indicates fine swimming on the part of the Indiana group.

Ken Krueger broke an MSM school mark in the 200-yard backstroke. His time of 2:21.8 topped that of Bill Webb of the opposing squad. Tom Jones whipped

umph over Louisville University. The additional 175 miles to the Kentucky city were well worth while, as the MSM team, under the direction of Coach Burr Van



Miner swimmer executes fine backstroke.

through the 50-yard freestyle and Norm Nuss topped the individual medley event. Nuss totaled 8 points for the day, the MSM high.

The shoe was on the other foot the following day, as the Miners strolled away with a 60-35 tri-

Nostrand, ran its season mark to 4 wins and 3 losses.

Nuss was again the high man, with 11.75 tallies. The Silver and Gold swept nine of the events, totaling 60 points to Louisville's 35.

400-yard medley relay — 1. Kruger, Kadwell, Horner, Nuss (MSM); 2. Meredith, Panthe, Abbott, Locaco (L).

200-yard freestyle — 1. Virtue (MSM); 2. Palmer (MSM) 3. Kirn (L).

50-yard freestyle — 1. T. Jones (MSM); 2. Ogden (L); 3. Knopf (L); 4. Rhoades (MSM).

200-yard individual medley — 1. Nuss (MSM); 2. Panther (L); 3. Garrett (MSM).

Diving — 1. Nations (MSM); 2. McDonald (L); 3. Knopf (L); 4. Wessler (MSM).

200-yard butterfly — 1. Horner (MSM); 2. Abbott (L); 3. Haymes (MSM).

100-yard freestyle — 1. Nuss (MSM); 2. Tom Jones (MSM); 3. Meredith (L); 4. Kirn (L).

200-yard backstroke — 1. Krueger (MSM); 2. Ogden (L); 3. Garrett (MSM); 4. McDonald (L).

500-yard freestyle — 1. Virtue (MSM); 2. Locaco (L); 3. Knopf (L).

200-yard breaststroke — 1. Panther (L); 2. Short (MSM); 3. Kadwell (MSM).

400-yard freestyle relay — 1. Abbott, Kirn, Meredith, Locaco (L); 2. R. Jones, Palmer, Clynes, Nations (MSM).

Sports Calendar

BASKETBALL

February 22 Cape Girardeau, at MSM (MIAA play)

SWIMMING

February 22 Central Missouri State, at MSM, 2:00 p.m.

February 28-29 Interstate Championship at CMS

INTRAMURAL SPORTS

March 3, 4, 5, 6 Wrestling

MSM Athletic Program Object of Major Changes

The recent announcement of the appointment of Dewey Allgood to the position of head football coach of Missouri School of Mines has raised the question of what changes are to be made in the athletic program.

Of course the direct changes are the alterations and additions to the present coaching staff, including the hiring of a head basketball mentor, and possibly an end coach for the pigskin loop. Burr VanNostrand will continue to direct the Miner swim-

mers, and will also double as line coach in football. Gale Bullman is expected to remain the head of the varsity track squad, and he will also help Coach Allgood on the backs.

Objective: To Win Games

When asked how his football tactics will differ from those used by Coach Bullman, Allgood answered by saying that they both have the same objective - to win games. Naturally some formation changes can be expected, but as to what they are, we can only wait and see.

One thing that Coach Allgood is not holding back on is the recruiting of some football players. As it has been publicized, the average size of the 1963 squad crept to a low of approximately 35 men. With these disastrous figures in mind, Allgood has been busy contacting prospective players with some favorable results. Although no names are be divulged at this time, it is expected that some new faces will be seen on the field next season. Allgood has expressed hope for 60-65 men, and expects at least 50 to show up for the first practice.

Limited Scholarships

The grants in aids provided by the school for athletes will be given out on a basis of need, ability, and desire of the individual. Some of these have been available in the past, and it is expected that the new ones will take the form of the old, where housing and fees were taken care of according to the situation. MIAA regulations permit only 35 scholarships or grants to be given out in all sports, thereby cutting football down some more.

Bullman, Athletic Director

At the same time Dr. Baker announced the official appointment of Gale Bullman, chairman of the physical education department, to the post of athletic director.

The "Old MIAA" Conference
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MIAA REPORT

As of Feb. 10th, a look at the standings in the MIAA showed that Cape increased its lead during the week. The two teams tied for second place, Kirksville and Warrensburg, split a pair of games, while Cape continued its winning ways.

Several tough, hard fought, games have cut into the averages of the league's leading scorers and rebounders. Bud Vallino of Warrensburg continues as top man in both departments. Vallino has a 23 point average through 19 games. He also carries an 11.7 rebound average. Ralph Farber of the Miners continues to hold second place among the scoring leaders even though his average slipped to 21.44 points per game. Farber slipped from 8th to a tie for 9th place among the rebounders. His average is 7.8 rebounds per game. Marty Howard, also of MSM, moved from 8th to 7th place among the scorers although his average dropped slightly to 13.11 points per game. Howard also has a 10-2 rebounding average.

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Free Throws Trouble Miners in MIAA Games

The Missouri Miners went down in defeat last Tuesday night to a team which they had beaten previously this season. Evangel College in Springfield, Missouri, handed MSM an 88-76 set-back in a game which was decided by free throws.

Both squads hit on 29 field goals for the entire contest. However, the Evangel group dropped in 30 charity tosses as compared to the Miners' 18. This made the winning difference.

Ralph Farber was held to a mere 3 points in this game, his low for the season. Only two men from MSM made the double scoring figures. Top man for the opposition was Cook with 29 points. He was followed by Husong with 15, and Peak with 14. Jack Hornbuckle dropped in 11 for the Miners, and Carl Reichert sank 12 points.

The difference at the free throw line was even more distinct against Central Missouri State at Warrensburg last Saturday night, when the Miners outscored their adversaries from the floor by four field goals. The Mules totaled 38 from the foul line, while the Miners could muster only 22.

MSM (76)	fg	ft	pf	tp
Howard	4	1	2	9
Hornbuckle	3	2	4	11
Richner	1	0	4	2
Farber	1	1	2	3
Huegerich	3	3	4	9
Callisto	2	0	3	4
Wolf	1	0	2	2
Hilgendorf	1	2	3	4
Hale	2	4	0	8
Beard	4	0	4	8
Reichert	5	2	2	12
Wallace	2	0	0	4
Totals	29	18	30	76

Evangel (88)	fg	ft	pf	tp
Peak	4	6	4	14
Cook	11	7	2	29
Husong	4	7	3	15
Campbell	3	3	4	9
White	1	1	3	3
Clark	1	1	1	3
Wray	1	0	1	2
Russell	1	1	0	3
Anderson	2	2	0	6
Tuone	1	0	0	2
Spence	0	2	1	2
Totals	29	30	22	88

MSM (78)	fg	ft	pf	tp
Howard	5	1	2	11
Hornbuckle	2	0	4	11
Richner	1	2	4	4
Farber	8	4	4	20
Huegerich	3	1	4	7
Callisto	1	3	1	5
Wolf	0	3	0	3
Hale	6	4	3	16
Reichert	1	2	2	4
Totals	28	22	29	78

CHS (86)	fg	ft	pf	tp
Vallino	11	8	3	30
Pollock	1	1	3	4
Caine	5	4	3	14
Orchid	2	5	1	9
Brown, D.	0	3	1	3
Brown, K.	2	7	4	11
Lindgerm	2	3	1	7
Leathers	1	1	3	3
Totals	24	38	19	86

Score at half-time: MSM 41, CMS 47
Officials - Goddard and Stockton

Farber collected 20 points as he jumped out of the previous game's slump. Hale totaled 16, and Martin Howard 11. Scoring ace Bud Vallino of the Warrensburg club raised his average even more, as he continues to top all conference scorers. Vallino burned the nets with 30 points against the Miners, 11 field goals and 8 free throws. Gaine scored 14 for CMS, and K. Brown scored 11.

ATHLETIC PROGRAM

(Continued From Page 9)

or, Bullman has directed the athletic program and in addition has been football coach at the School of Mines since 1937. He will devote his full time to directing the expanded overall athletic program, which will be stepped up in both competitive and intramural sports with the addition of new coaching personnel.

School of Mines officials stressed that the addition of Key to the staff will strengthen the overall athletic program of the school.

"We have had an outstanding intramural program for years," Bullman said. "The addition of Key to the staff will not only help us in the competitive sports field, but will help our intramural program keep pace with our increasing enrollment."

The student body has high hopes that the revised athletic administration will be able to come up

MIAA REPORT
(Continued From Page 9)
age, good for second place in the conference.

Cape continues to show its well rounded attack as they mow down their conference opponents. Cape's top scorer, Ringstaff, holds only 8th place among the scoring leaders; yet they have lost only one game of seven in conference play. The Miners, at the other extreme, have two of the top scorers and rebounders in the league and have yet to win a conference game.

Some scores from recent games are Springfield over Kirksville 68-65, Harris Teachers 82-MSM 70, Cape slaughtered Ft. Leonard Wood 135-80, Warrensburg over Maryville 80-54, and Springfield prompted the Miners 113-80.

In the overall standings, Cape leads with a 15-4 record. Kirksville is second with 14-5. Next comes Warrensburg at 12-7, Springfield at 10-8, Maryville at 5-14, and the Miners in the cellar with a 4-14 record.

MIAA Conference Standing

Team	W	L	Pct.
Cape	8	1	888
Warrensburg	6	3	666
Kirksville	5	4	555
Springfield	5	4	555
Maryville	3	6	333
MSM	0	9	000

with the winning combinations of material, desire, and leadership, to form the basic units of the MSM athletic program.

SIDELINES

By Bruce T. Gregg

There is now little more than a week left for the intramural wrestlers to get in their required number of workouts. After February 28 those individuals who have not met the requirements will be cut from the list as not physically qualified for the sport. Therefore participants are urged to put an added effort in this final stretch.

Many individuals claim that these workouts are unnecessary for some, and that the required number be lowered. These students must realize that wrestling is a test of physical endurance, and a man must be able to withstand constant demands upon his body strength throughout the duration of his match. As wrestlers know, one can be going strong and have all his strength at command and in a fraction of a second become utterly exhausted. The more workouts put in, thus bettering his physical strength and endurance, the longer he will be able to hold his own in the match, and the longer he will be able to delay his breaking point.

Besides endurance, a wrestler must, of course, have ability and thorough knowledge of the sport in order to beat his opponent. Quite often the intramural matches here at MSM are a test of which man can outlast the other. However, there are also those matches which really display technique, knowledge, and ability. It is these matches that are true wrestling and which make the sport as popular as it is on this campus.

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CONFERENCE HISTORY

(Continued From Page 9)

seemed doomed to failure from the start, not so much from the different ideologies between the state schools and the denominational schools, as from the unwieldy size of the conference; also the athletic programs at the various schools differed greatly in the sports in which intercollegiate competition was held. These facts, made it virtually impossible for all schools to compete against each other in all sports, and, as a result, no true champion of the conference could be established in any intercollegiate competition.

The split in the "Old MIAA" Conference was made in 1923, with the independent or denominational schools withdrawing to form the Missouri College Athletic Union.

The name officially adopted for the new conference is the same as used today, the Missouri Intercollegiate Athletic Association.

Membership in this Association was, and still is, limited to institutions classified as colleges by the North Central Association of Colleges and Secondary Schools, or as a four year college by the American Association of Colleges for Teachers Education.

Rules and by-laws to govern conference athletic competition were drawn up at a meeting in Kansas City, in 1923, and the Association officially started conference competition in the fall of 1924. The MIAA Conference as organized in 1924 was a five team conference, comprised of the following state schools, known today as: Central Missouri State

College, Warrensburg; Northeast Missouri State Teachers College, Kirksville; Northwest Missouri State College, Maryville; Southeast Missouri State College, Cape Girardeau; and Southwest Missouri State College, Springfield.

The MIAA Conference functioned as a five team league until the fall of 1935, when they became a six team conference with the addition of the Missouri School of Mines and Metallurgy, Rolla. These six schools comprise the present day Missouri Intercollegiate Athletic Association.

Miner to Be Missionary

Roy Brunson, a sophomore in chemical engineering, has been named a summer missionary to the state of Oregon. While active in Baptist Student Union, he is a member of Phi Eta Sigma and AICHE. Roy is a transfer student from Arkansas State in Jonesboro.

The program of Summer Missions is promoted by the State Student Department of the respective states. This program is financed by contributions made by students through their BSU.

Applications are made by the student and then a committee chooses the ones best suited for this type service.



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