THE SCHOOL OF ENGINEERING AND ARCHITECTURE

TECH NEWS

CITY COLLEGE OF NEW YORK

VOL. XVIII — No. 2 | WEDNESDAY, MARCH 27, 1963 | BY STUDENT FEES

AIA Prepares Floor Plan Directory For The College

If a game of "hide-and-seek" were to be played in the Finley Center, the person who is "it" would probably never win. The Center is a complicated maze made up of wings, annexes, extensions, halls, and basements. It is a building in which upper seniors have trouble finding their way around; the plight of the poor freshman, alone in the unfamiliar labyrinth that is the Finley Student Center, is very pathetic indeed. And when our bewildered freshman is not wandering about in Finley, he might be wandering about in one of the other buildings on campus, still a bit lost. In fact even upper classmen do not know all of the hidden details of such buildings as Shepard Hall or Steinman Hall.

It was realizations such as these, and a desire to provide some sort of guide to incoming freshmen, that prompted Ted Brown, last term's SG president, to approach the college's new architecture students and see if they might be able to help the situation. The result of this meeting between SG and the Architectural Society is one of the most impressive student undertakings at the College: the Cartographic Commission.

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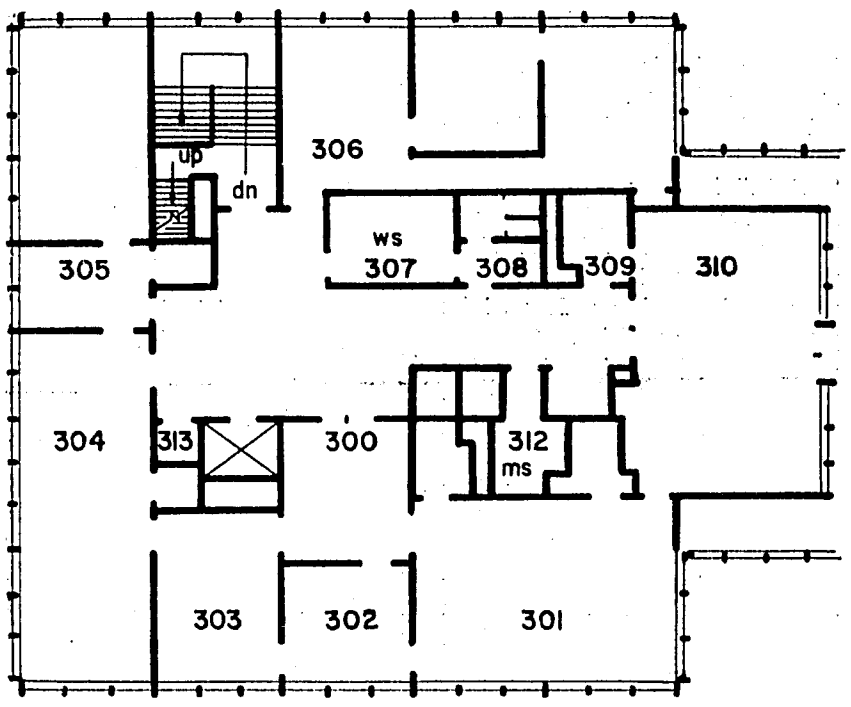


THIRD FLOOR

Third floor of the Administration Building as it appears in the published floor plan.

AIAA Plans To Tour Thiokol Rocket Plant

The College's student chapter of the American Institute of Aeronautics and Astronautics will sponsor a spring vacation field trip to the rocket engine plant of the Reaction Motors Division of the Thiokol Chemical Corp.

Scheduled for Wednesday, April 10th, the trip will feature a guided tour of the Reaction Motor Division facilities at Denville and Rockaway, N.J., 35 miles west of New York City.

Among the areas to be covered by the tour are the research laboratories (Chemistry, Physics and General Research Depts.), the Engineering Laboratories and Production facilities, and the Lake Denmark test site. The latter area contains 23 engine static test stands with capacities of up to 1 million pounds thrust each. Also included in this site is a remote control plan equipped to grind, mix, cast, cure and machine solid propellent grains.

Thiokol, one of the country's largest makers of rocket engines, produces propulsion systems for Minute-Man, Falcon, Nike-Zeus and several other missiles. The Reaction Motor Division began 22 years ago to produce rocket engines for the Navy. The firm specialized in liquid propellent engines which presently constitutes most of Thiokol's production. In addition to missile propulsion plants, Reaction Motor's best known engines have been those made for the "X" series of research aircraft, from the X-1 to the X-15.

The student group will leave from the college at 9 A.M. and return by 6 P.M. Tickets must be purchased in advance and will be sold in Room 108, Shepard, betwen 12 and 2 P.M. on Thursday, March 28th and Thursday, April 4th. The cost will be $1.50 for A.I.A.A. members and $1.75 for others. Full details may be found posted near Room 5, Steinman Hall.

—Rosenfeld

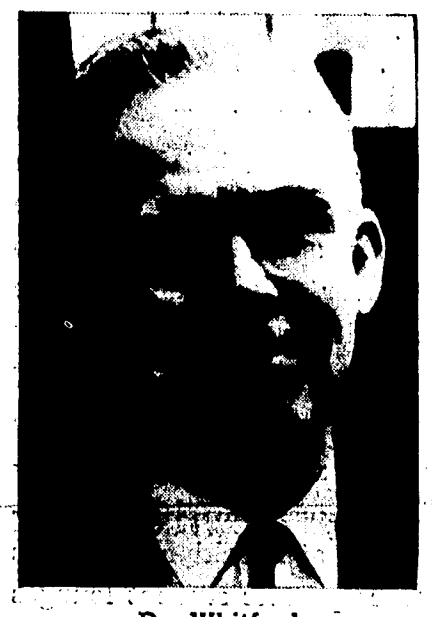
ATTENTION — ENGINEERING GRADUATES

All engineering students who will receive their Bachelors' degrees in June or September 1963 and who have been granted awards, fellowships or assistantships, please notify Dean White, Administration Building, Room 205, as soon as possible but not later than April 30, 1963.

Tech Library Finally Sees Light Of Day

According to Dr. Robert H. Whitford, "There's sunlight at last." Dr. Whitford, assistant librarian in charge of the Engineering and Science Library, was referring to the nomadic existence of the library over the past few years. There's better than an even chance, though, that the library has found its "Xanadu" on the second floor of the new Steinman Hall.

Prior to August, the library was housed in the Great Hall. If light did filter through it was muted by the stained glass windows. However, as Dr. Whitford happily pointed out, "The large medieval hall absorbed most of the noise." The Great Hall was only one of several temporary shelters for the present fifty-thousand volumes. First there was the basement of Bowker Hall which was on the site of the present Engineering Building. From there the library migrated to the faculty room opposite the Great Hall, but its romance with the sun was short-lived. It moved, in quick succession, to the basement of Townsend Harris and into the Great Hall.



Dr. Whitford

(*Continued on Page 3*)

Tech Officers Return And Talk Of Industry

What is it like when an engineer graduates and goes to work? Mike Rukin and Warren Wolff, two recent graduates, came back last week and answered the question. They were both on campus inteviewing for Mitre Corporation, and they took the time out to address an informal meeting sponsored by Tau Beta Pi. Mike was president of HKN and Tau Beta Pi, and Warren was president of Tech Council. It has become a custom for recent graduates to come back to school and tell of their own experiences.

If the engineer is working for a firm doing secret government work, his first weeks are usually spent doing very little. No one is allowed to speak to him about the work actually being done. Once the clearance comes through, however, he is assigned an actual task. Students need not fear being put to work on a several million dollar project and then bungling it. It takes a little while before a new engineer is given large responsibilities.

If he is willing to work, however, a newly graduated engineer can work himself up rapidly. He may find himself in areas he did not expect to find himself in. Warren Wolff is presently in charge of evaluating the human element in equipment design, the question of how will its user function with a given device. Mike Rukin is working with personnel.

The talk was based upon the experience of the two men in the Mitre Corporation framework, and consequently the company itself was discussed in some detail. Mitre was formed in 1958 from a section of MIT's Lincoln Laboratories. It is a non-profit organization, and it does not engage in actual manufacture. Its product consists of technical proposals which are then sold to the highest bidder. Work is done in three main areas, Federal work for the Air Force electronics systems division, civil work such as control patterns for commercial aviation, and the general field of what industry is expecfed to be concerned with in the future.

After the businesslike portion of the meeting, the group settled down to a bull session highlighted by Mike's new Bostonian accent.

AIChE Met Confab Set For Saturday

This Saturday, the American Institute of Chemical Engineers will host a city-wide conference of eight colleges for the Undergraduate Student Paper Contest, and other activities in Steinman Hall from 9 A.M. to 2 P.M.

At the start of the contest, Robert Killen, Eugene Graff, and Vincent Esposito will each deliver an abstract of his paper, which was chosen for the final presentation. Mr. Killen, a student at City College, wrote a paper on "Hydrazine and Its Derivatives as Propellants." Mr. Graff, also a student at City College, wrote a paper on "Heat and Mass Transfer in Freeze Drying." Mr. Esposito, from the Polytechnic Institute of Brooklyn, wrote a paper on "The Neutrino."

The three papers were selected by Dr. Gino Giusti of the Texas Gulf Sulfur Co., Mr. Joseph Jewett, Jr. of Scientific Design Co., and Dr. Walter Schnyder of Hoffman La Roche Co. These men will judge the final contest. A maximum of two papers from each of the eight colleges may be submitted. From these, three will be chosen to compete for the first, second, and third prizes.

At 11:30 A.M. there will be a tour and inspection of the Chemical Engineering Laboratories in Steinman Hall.

The Vice President and General Manager of Cities Service Research and Development Co., Dr. H. L. Malakoff, will be the speaker at an awards luncheon starting at 12:30 P.M. in the Faculty Dining Room. Prizes will be presented to the three winners at this time.

Since there are eight colleges in the Metropolitan Conference of the Student Chapters of the American Institute of Chemical

(*Continued on Page 3*)

Vector Sales Reach 800

Vector, City College's fine technical publication, was on sale from March 18th through March 20th. Approximately 800 issues were sold at 25c each. Editor Hugh Kilpatrick termed the sale as fair and pointed out that there is a "small but loyal group of students who always purchase the magazine."

The forthcoming May issue will include a story by Sheldon Katz on a new type of gas engine and an article on Freeze Drying by Eugene Graff. Graff's paper on this topic has been chosen to represent C.C.N.Y. in the AIChE paper contest to be held at the college on March 30th.

Chief criticisms of the magazine were the usual complaints that the material was too technical and too difficult for most readers.

Copies which were not sold are mailed to advertisers and subscribers.

TECH NEWS

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Speaking of Buildings

Recent editorials in Campus and Main Events have voiced the need for a drama and speech building which would have auditorium and theater facilities extensive enough to present shows, concerts, and other features to large audiences. We would, however, suggest an alternate plan: a high rise structure be built on the North campus which would be a combination drama and speech building and student center.

The principle of double use for a building has already been incorporated into the new science and physical education building. Walt Whitman Hall at Brooklyn College is a magnificent auditorium that incorporates student lounges into the general auditorium theme.

The need for dramatic arts facilities has already been elaborated upon. The advantages of the combination are numerous. A whole set of problems could be solved at once.

We could have a decent cafeteria .The cafeteria is now woefully overcrowded. There isn't enough room for either students or staff; a table was recently taken out of student hands and reserved for staff. With the increased North campus population which will result from use of the new science building, the situation will get worse.

A long awaited North campus bookstore could become a reality. It is inconvenient for many students to continually dash South for needed supplies. Much more important, the problem of intense crowding occurring at the beginning of each term when students buy all their books can be eliminated.

There is still a lack of lounge space on North campus. Tech Council is exhausting itself over many elaborate plans to get just one more lounge. Lounges can especially fit in well with the theater itself. A good theater usually has several.

There isn't enough room in Finley for the large number of clubs presently on campus. There are about 150 organizations, and most of them have no office in the center. Those that do usually share them. All the Tech groups, for instance, have only one room between them. It is in the name of TC.

In the last issue, we discussed the culture and polish of the City College engineering student. With a North campus student center and theater building, perhaps some culture can rub off. The engineer is more in need of cultural activities than any other kind of student in the school. Everything possible should be done to make such activities conveniently available to him.

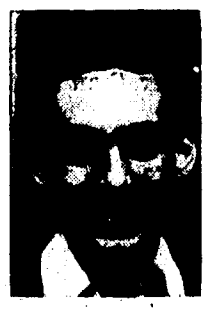
Space is a rapidly disappearing commodity around City College. The crowding and lack of facilities on North campus is only a problem of discomfort right now. But it will soon become a very major concern. The time to consider what is to be done is right now.

Inquiring Techographer

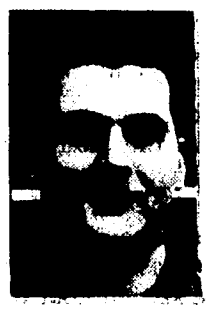
QUESTION: "What do you plan to be doing five years after you graduate from college?"

ANSWERS:

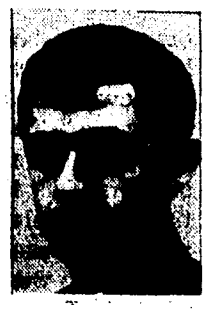
Charles Marino, senior, M.E., lives on Staten Island. "I want to go into Aeronautical Engineering research and development, or fluid dynamics. I plan to work on the West Coast for some concern."



Peter Marcus, sophomore, C.E. lives in Queens. "Possibly I'll be working for some government agency, or working abroad in highway engineering."



Richard Miller, junior, E.E., lives in Richmond. "That's a good question. I am thinking of Air Force O.C.S. with my Bachelor's degree, or possibly industry. My parents are bothering me to teach, but I'm still undecided."



George Coste, C.E., lives in the Bronx. He came to the United States from France when he was seven. "I have applied for a commission in the Army, and when I graduate I plan to serve for three years. If I like the Army, I will remain and get my Master's degree through the Army, and serve for twenty years. If not, I will work for a contractor either here or in France."

Carolyn Pavlat, sophomore, Chem.E., lives in Manhattan. "I'd like to work in research, but I have to graduate first."

David Welcher, freshman, E.E., lives in Brooklyn. "I will probably be working for one of the large companies like G.E. or RCA as a research engineer."

Ed Kippel, senior, Chem.E., lives in the Bronx. "I am thinking of possibly making the Army a career, or of working with high polymers in industry."

Brenda Yaes, freshman, Architecture, lives in Queens. "Five years after I graduate, I hope to be not only a good designer of private homes, but also a good wife and mother."

ASME

ASME presente Mr. F. A. Danahy, of the New York Central System, speaking on "Opportunities in Railroading for Engineers" on March 28. Program will begin at 12:30 in Harris 106. Early-bird film at 12:15.

NDT Lectures Show Testing Techniques

Is it possible to detect cracks as small as 1/1000 of an inch on a sheet several feet long on an assembly-line basis?

The critical demands of modern technological production and safety have created an organization by the name of Society for Nondestructive Testing. Its field of study though can be highly complex and at other times amusingly simple.

In the first of a series of four lectures on Nondestructive Testing Mr. H. W. Ebert of the Foster Wheeler Company gave an introductory talk on his specialty. In referring to the "newness" of Nondestructive Testing (N. D.T.) as a science, Mr. Ebert said that prior to W.W. II there was no graduate work done in N.D.T. The uniqueness of this type of testing is that it tests the material actually being installed to perform a specific job. Unlike pilot type testing or sample testing no use is made of safety factors, etc., because knowledge of each specimen's idiosyncracies is obtained. Little is left to chance.

The oldest branch and the one requiring the least equipment in "N.D.T." is the use of the five senses. As an example of the use of the senses Mr. Ebert cited that smelling of gasoline is one way to determine a few of its production qualities. On the other hand little is left to the sense of smell in a nuclear reactor. Mr. Ebert said that, "Every component of a nuclear power plant is tested by two methods; because of the safety involved the cost is justified."

In preparation for the proceeding lectures Mr. Ebert then went into the more subtle branches of the N.D.T. field. An attempt was made to introduce the audience, with the aid of slides, to the basic theory behind the four main types of testing.

Mr. G. R. Frank of The Magnaflux Corp. gave the following lecture on surface testing. Dye penetration testing can detect cracks as small as 1/1000 of an inch. It operates on the basis that dyes absorbed by the crack will expose the location of the crack when it is "bled out" by a developing agent.

Magnetic particle testing makes use of the fact that a crack in a magnetized material will produce a set of poles. The operation is the same as sprinkling iron particles over a horseshoe magnet.

Mr. J. Dewton followed with radiography testing. Radiography or the use of X-rays is also employed. With the procedure, use is made of a darker image on a film for lower density materials than high density metals. The source of rays is placed at one end of the material and a film at the other end. In this manner blow holes or sand particles may be detected.

Untrasonics appears to be the most sophisticated of all methods mentioned. Harmonics of a sound wave can be used to determine thickness of materials to a precision heretofore thought unattainable.

The seminar sponsored by Chi Epsilon and The Society was held in Steinman Hall. The lectures extended over a four week period, and ended March 6. Prof. G. Olsen (CE), acted as moderator for the seminar.

Floor Plan . . .

(Continued from Page 1)

The Cartographic Commission, headed by Mike Wolfe of SCAIA and sponsored by Student Government is presently preparing directories of several of the college's buildings. The directories consist primarily of the plans of each floor of a building. "These are not actually floor plans," explained Mr. Wolfe," but you might call them 'sight' plans because they include stairways, walks, lamposts, and such." These sight plans are intended for the incoming freshman. By glancing at them, he will immediately be able to determine exactly where he is.

The starting point for the production of one of the plans is the building's blueprints, which have been obtained from the Department of Buildings and Grounds. The original copy is then done from these blueprints. This is the most difficult part of the Commission's work. It requires a carefully done drafting job; every intricate detail of a building must be included, drawn to the appropriate scale. It is here that architectural training comes in, the proper symbols for walls, doors, and stairwells are used. The drawings already completed have been done so well that they will probably be used for permanent wall directories.

When a drawing is completed it is photographed, then taken down and printed on 8½" x 11" paper. Permanent rooms, such as the Registrar's offices in the Administration Building have been lettered in. Other rooms are indicated by their number. The plans of each floor of a building are then assembled together in a brochure, the cover of which is a photograph of the building, taken by Microcosm, the senior yearbook. A directory on the last page of each brochure indicates what is in each of the numbered rooms.

At the present time, the Administration Building has been completed. Finley Center will be completed by May. Shepard and Steinman Halls are next on the Commission's agenda. Looking further into the future, the Commission hopes to do the new Science and Physical Education Buildings.

The brochures will be distributed to all future freshmen at the College, as part of the Freshman Orientation Program, by the Department of Student Life. SG is confident that this is an ideal way to guide freshmen in their new school. Copies of the Administration Building Directory are now available in 152 Finley for those upperclassmen who would really like to know their way around the College.

—Gottlieb

enior Class Reminders

nior Prom: Tickets are now on sale for the "Ship 'n' Shore" Prom be held Sunday, June 9, at 7:30 p.m. Tickets can be purchased Finley 206, the Senior Class Office, at the following times: n. 12-2, Tues. 11-1, Wed. 11-1, Thurs. 11-3, and Fri. 11-2. Full ce is $26 per couple; however, only a $10 deposit is required. kets will be sold on a first come basis and the total number is ited by available yacht space. To be included with the price admission is transportation to the Riviera Yacht Club, Port shington, L.I. by private chartered yacht, a cocktail party upon ival at the club featuring hot and cold hors d'oeuvres, and ner which will consist of Roast Prime Ribs of Beef. Music will supplied by the Tiny Mann Orchestra. Final day for deposits May 2. Tuxedo rental service is presently being arranged.

o and Gown Rental: Rentals are $4 for those holding senior class ds, $5 for those without. Late rental after April 30 will be $5 d $6 respectively.

e Concert: Holders of Senior Class Cards can get a free ticket the Linda Hopkins One Woman Show to be held on Friday, ril 19, at 8 and 10 p.m. Additional tickets will cost 75 cents apiece.

ibrary . . .

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When a Ph.D. Program in Engering was approved recently effect on the library was imdiate and profound. "We will ed more books and newer bscriptions. Space in effect l dwindle," Dr. Whitford d. The present capacity of the rary is eighty thousand volmes. "Foreign language books l increase; you can expect an rease in the use of these oks for the Doctoral Proam." He further added, "The rials Committee is in charge requests. Priority rating is criterion in light of budgety considerations."

At present the library is get-g 800-900 texts a year and ee hundred bound magazines. nyone may recommend books be bought," he was quick to int out.

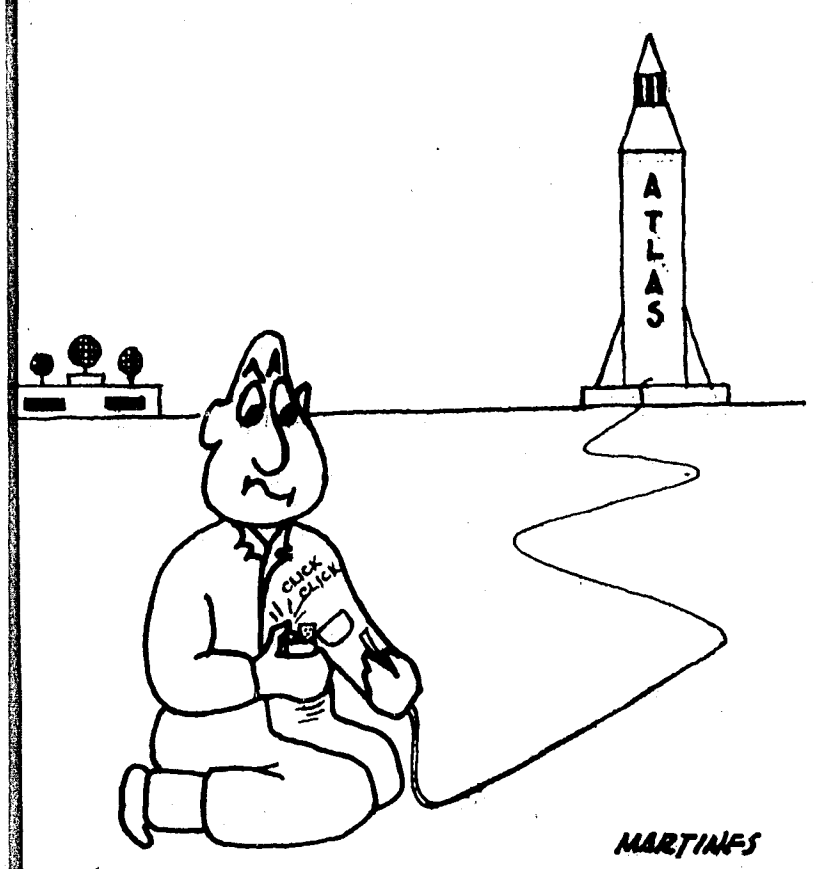
For those concerned with more immediate exigencies a pencil sharpener will soon be installed. This will happen as soon as Dr. Whitford completes "major repairs" on the book lift.

Whatever aesthetic qualities it may or may not have, the library can serve more people than before. In fact, there has been a slight increase in the number of people using the library since its moving. The library also contains a conference room that can be used by any group of students requesting it for research work, etc.

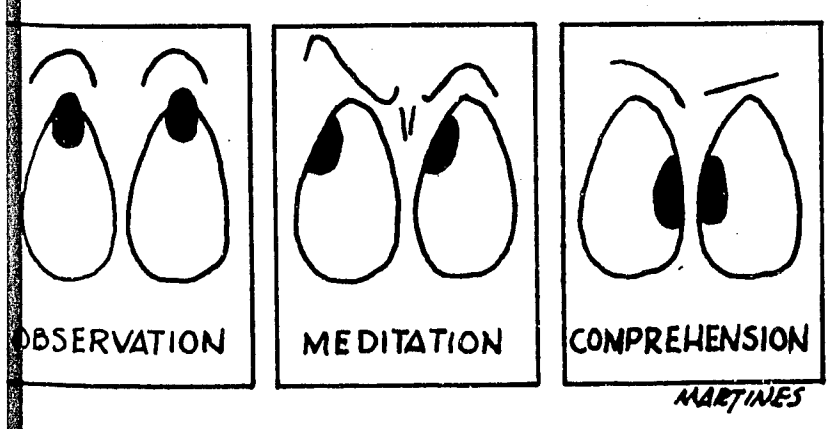
Dr. Whitford has been with the travails of the Engineering Library for thirty-seven years. He holds a B.S. (C.C.N.Y.), M.E. (C.C.N.Y.), B.S. (Lib. Sci.), M.S. (Lib. Sci.), and an Ed. D. All this is complemented by membership in Phi Beta Kappa, Tau Beta Pi and other honorary fraternities.

—Miller

Egghead Society



Damn it!



Looking at the Tech Mural

Justice Douglas To Speak Here

Justice William O. Douglas of the United States Supreme Court will lecture on "The Erosion Of Liberty" on April 3rd at City College.

The lecture will be given in Aronow Auditorium, Finley Hall at 5 p.m. Tickets may be obtained from Professor Jaher (History).

The lecture is the 1963 presentation of the History Department Lecture Series.

Justice Douglas was appointed to the Supreme Court in 1939 by President Roosevelt.

Rocket Soc. Turns To Astronautics

A new technical society, the 40,000 member American Institute of Aeronautics and Astronautics, came into being recently with the merger of the American Rocket Society and the Institute of Aerospace Science. The new organization will be represented at City College by the former student chapter of the American Rocket Society.

The product of over a year of intensive negotiations between its two predecessors, AIAA covers the entire aerospace field from air transport to planetary exploration.

The last president of the A.R.S., Dr. Martin Summerfield of Princeton University, explained some of the reasons for the merger: "As we examine the state of astronautical science and technology . . . we are forced to conclude that the American Rocket Society had to take a large step forward if it was to represent properly this giant field. It could no longer ignore the related developments in modern aeronautics by the large number of equally active and equally productive engineers and scientists affialiated with the I.A. S. Consolidation with the I.A.S. was the logical big step forward."

It is also hoped that the merger will substantially reduce duplication in the scheduling of technical meetings and in several other areas.

Reports of government and industry pressure favoring the merger on these grounds, are thought to have prompted occasional charges last year that "steamroller tactics" were being used by the officers and directors of the two societies. However, most sentiment was favorable, and the membership of both groups approved the merger by substantial margins in the balloting last Fall.

The A.R.S. and the I.A.S. were nearly equal in size, the rocket society being somewhat larger and showing greater growth. Both groups were also about the same age, having been founded more than thirty years ago. Dr. Summerfield is now vice-president of the new organization, the president being Dr. William H. Pickering, Director of NASA's Jet Propulsion Laboratory at Cal. Tech.

—Rosenfeld

Summer Jobs

This is the first of a series of articles on jobs held by Tech students during the summer vacation.

By TED BERG and WALLACE GOTTLIEB

Most students do not think in terms of rats or cochroaches when they are looking for a summer job in engineering. You can be sure I wasn't when I was filling out numerous applications for summer employment last year. My efforts were finally rewarded with an acceptance from a local firm of consulting engineers. (These are not the rats or cochroaches I mean.)

The firm was working on the U.S. Government Fallout Shelter Survey which was being conducted in New York City. The object of this survey was to estimate the number and size of existing structures that could be used as fallout shelters, as well as estimating the construction necessary to convert other structures into suitable shelters. For this purpose, upper classmen, recent graduates, and graduate students were hired for summer work.

During the first few days with the company, all of us associated with the project went to a series of lectures given by senior engineers. These lectures covered every conceivable aspect of fallout shelter theory and construction. Typical lectures were on radiation effects and measurement, shielding requirements, ventilation, electrical and capacity requirements, as well as New York building codes that had to be observed in the construction of shelters. In addition, we were given printed material to which we were able to refer during the months to follow.

Since I am an E.E., I found the lectures interesting and informative although I had not taken any of this material in school. For the first time I understood the purpose of an engineering education. This purpose is not to learn an assortment of isolated facts, but to prepare the student to be able to attack any technical problem from an educated and technically informed point of view. I learned also, that in this case (as it must be in many other cases), there is a "human" side to a technical assignment.

In order to perform the several analyses mentioned above on an existing structure, this structure had to be seen; the arrangement of obstructions within the shelter area, the location and size of windows, the thickness of the walls, etc. are essential for shelter calculations. So, aside from the actual slide-rule work, some of us had to visit potential shelter locations and prepare a sketch of the location. These sketches would then be used in the office for the analysis of the area.

It had been determined that the best location for a fallout shelter is the basement of a building. This is where the rats and cochroaches come in. New York's basements and cellars are crawling with them! It was not uncommon to see a small (sometimes large) creature scurry across my clipboard or my shoes. Occasionally, it was necessary to convince a suspecting building superintendent that I was not a thief who had come to steal the treasures that might be hidden away in his cellar. This was where the "diplomatic" side of the job came in.

When the field work was completed, I spent the rest of the summer in a beautiful and modern office on the twenty-eighth floor of a Madison Avenue building. My work dealt with calculating the ventilation and electrical requirements of the potential shelters. I worked at a desk of my own, where I applied what I had learned at the lectures to the sketches that were made at the buildings. I often found myself comparing what I was doing to the work I do in my courses. The sketch of the building corresponded to homework problems. The shelter requirements were my unknowns. The lecture material was the theory to use to solve the given problem.

Looking back on the past summer, I feel that the experience I gained was not only in the assortment of technical information I learned on subjects not taught in school. The real experience was learning the organization and proceedures of an engineering firm. I was impressed by the congenial atmosphere, the willingness of Senior Engineers to discuss any problems which arose and the idea of meeting a deadline. This was accomplished by a well directed effort of all those involved in the project. I learned that the engineer is not a machine hired to grind out technical problems that cannot be done on computers. The engineer is a necessary individual in our society, trying to solve practical problems which affect the lives of others.

Conference . . .

(Continued from Page 1)

Engineers, the City College of New York is host to the conference once every eight years. Last year the contest was held at Cooper Union. The other six colleges participating are Columbia University, Manhattan College, New York University, Newark College of Engineering, Polytechnic Institute of Brooklyn, and Pratt Institute.

Preparations for this conference are being made under the direction of Prof. Patell, faculty advisor of A.I.Ch.E.; Harvey Golubock, general chairman of the coming conference; Barry Miller, president of A.I.Ch.E.; and Daniel Kollin, chairman of the Social Affairs Committee.

The registration fee for the morning session, including the contest and the tour, is one dollar; for both the morning session and luncheon it is $2.50.

About 125 persons are expected to attend. Interested students should see Prof. Patell in the Chemical Engineering Department, or leave notes for the General Chairman of the conference, Mr. Harvey Golubock, at the same office. **— LaManna**

Designer Discusses Narrows Bridge

The world renowned Mr. O. H. Ammann spoke last week before the Society of American Military Engineers on the planning and construction of the Verrazano Narrows Bridge. For over half a century, the eighty-four year old Mr. Ammann has been connected with bridge design and construction. He has built California's famous Golden Gate Bridge and New York's George Washington Bridge. When completed in 1965, the Narrows Bridge will be the world's longest bridge.

The Narrows Bridge is the first important link between Staten Island and Brooklyn. It will permit traffic flow from New Jersey to New England to by pass Manhattan. It is expected to have a great influence on the development of Staten Island.

In 1954, the Triborough Bridge and Tunnel Authority and the Port Authority made a study of the traffic facilities around New York, and in 1955, they recommended the immediate construction of three new facilities. These structures are the Throgg's Neck Bridge, which supplements the Triborough Bridge, the second deck of the George Washington Bridge and the $325 million Verrazano-Narrows Bridge.

It's span exceeds the George Washington Bridge by 260 feet and the Golden Gate Bridge by 60 feet. The total length of the bridge and approaches is three miles. The central span is 4,260 feet and the side spans are 1,215 feet. The four suspension cables, two on each side, are 3 feet in diameter. Each cable is made up of 61 strands with each strand consisting of 60 wires each the thickness of a lead pencil. They would extend six times around earth. The Bridge has two decks, each with six lanes, which are capable of handling mixed traffic. The lower deck will not be completed until traffic flow necessitates its use.

Many of the problems of the planning and construction were presented by Mr. Ammann, who graduated from the Swiss Polytechnical Institution and has received honorary degrees from New York University, Yale and Columbia. He has been the Chief Engineer for both the Triborough Bridge and Tunnel Authority and the Port Authority.

In 1939 he retired and formed his own company. He has been in charge of the planning and construction of the following bridges: the Triborough Bridge, the George Washington Bridge, the Bronx Whitestone Bridge, the Hellsgate Bridge, the Bayonne Bridge, the Delaware Memorial Bridge, the Golden Gate Bridge and the Makinac Straights Bridge.

The Society of American Military Engineers which invited Mr. Ammann to the College in 1957 had as their guests in the audience Professor of Military Science, Lt. Colonel P. F. Bartow, Mr. Flemming of the Dept. of building and grounds, Major Welch, S.A.M.E.'s faculty advisor, and Prof. Pistrang representing the C.E. Dept. The junior year ROTC engineering students and the engineering students of the school were also invited to attend.

The Society of American Military Engineers has scheduled for April 3rd a lecture to be given by Mr. Blasius of the New York Telephone Co. on "SAGE." This lecture will be given at 5 p.m. in Harris 003.

—Wagner

Why Does The Clock Stop?

If you are wondering why the tower clock on Harris Hall occassionally stops, just ask yourself this question: "Why does my watch stop even when it is wound?" The answer lies in the fact that dirt gets into the mechanism, thereby preventing the parts from functioning. Also, as with every clock which works on electricity, there may be electrical trouble, such as a burned out wire or motor or a power failure. Indeed you are perhaps wondering who repairs this clock when it stops running. When asked this question, Mr. Fleming of "Buildings and Grounds" replied, "Minor repairs are done by the College itself, while major repairs are done by the company."

The time shown by the clock may not be the correct time, yet it is as accurate as your own watch. As long as the AC is steady, the clock will be steady.

As far back as 1915, this clock has been serving the students and faculty of the College.

This time piece of three feet diameter reminds us of the clocks on the Paramount, Metropolitan Life Insurance Building, and the Old Madison Square Garden. This landmark is put on all tall buildings.

— Schuchman

AIChE Victor In First Slide Rule Hoop Game

With little or no effort, the men of the A.I.Ch.E. basketball team compiled a 3-0 record . . . two forfeits and one win.

The morale of the men on the team was at an all time low last week. After many appeals and challenges to other teams the A.I.Ch.E. team was ready to play. They showed up for two games, but no one else did. Last Tuesday the brothers of Epsilon Nu Gamma, an Engineering social fraternity answered the challenge.

Mr. Berman, the person in charge of the gym, was amazed when both teams showed up for the game. The Chemical Engineers proved to be stiff competition for the men of ENG. They won 30 to 20. The star players of the Chem. E's was R. Diaz-Maranda, who scored 12 points.

The Slide Rule League has been a pet of the Tech Council for many years. Two years ago six societies were competing regularly in sports events. The number of societies has dwindled down to one or two.

It looks as if the Slide Rule League will disappear because of lack of participation. But the other night some hope showed as the men of two engineering organizations met on the court for a friendly game of basketball.

These games are open to all engineering societies. They are encouraged to participate in the athletic program of the School of Technology. The only requirement is that you bring your own referee and show up for your game. The Ch.E.'s challenge all. Anyone interested in playing please leave a note in the AIChE mailbox near the Chemical Engineering Offices on the third floor of Steinman.

—Grimaldi

Book Review

Materials Handbook: An Encyclopedia for Purchasing Agents, Engineers, Executives and Foremen, Ninth Edition, by George S. Brady. 912 pages plus index; 13 illustrations; 6 x 9; McGraw-Hill Handbook Series: $17.50. Publication date: February, 1963.

"Materials Handbook," Ninth Edition, is a revision of the widely used handbook of practical data on materials, providing a vast store of information useful in selecting and specifying materials for various purposes. Designed to provide, in one handy desk volume, data on the chief distinguishing features of 12,000 materials used in all types of manufacturing, the book is intended to provide useful information to purchasing agents, operating executives, procurement men, plant and production engineers, foremen, designers, architects, and others concerned with selection, specification, and use of industrial materials.

The handbook — practical, concise, technically accurate, yet written in simple language understandable to executives not usually specialized in technical terms — presents the most pertinent facts on metals, alloys, refractories, abrasives, woods, synthetic resins, industrial chemicals, and so forth. In addition, there is information on properties and characteristics of materials and substitutes, adulterants, and uses. The handbook also contains basic information on subjects like the economic geography of materials, resources, weights, measurements, physical comparisons, and charts and maps of distribution and production of world-wide material items.

Specifically, Part I of the handbook is an encyclopedia of 12,000 industrial materials indexed for quick reference. It provides clear descriptions of many processing materials used in the basic and intermediate industries, and imported raw materials of importance to American industries. Patented and trade-named materials are covered, giving a more specific understanding of commercial applications, and pointing up substitute and alternate materials with examples of their particular uses. The chief ores and most important industrial chemicals are also included.

Part II contains basic economics of industrial materials and reference tables on measurements and properties of materials. In addition, a comprehensive single-word Index provides an easy cross-reference which not only gives direct reference to individual materials, but also lists classes and types so that general background is instantly available. Thus, even the purchasing agent or executive who is unfamiliar with the precise material he needs will learn enough about the "why" and "how" of materials to make the correct choice for his purpose. On the other hand, specification engineers, architects, and other specialists appreciate the book because it serves as a convenient reference for making quick comparisons.

This Ninth Edition of the "Materials Handbook" is completely updated, covering the materials for the newer electronics, nuclear, and jet propulsion industries with sufficient analytical data on their backgrounds show how and why the ma ials are used. New, modern proaches to the selection of terials to meet the advan methods of the older indust are also described. Altho nearly 2,000 additional it have been included in the edition, the book has been k at a convenient size, retain the value as a handy desk erence volume. This has b done by careful regrouping rewriting of the data.