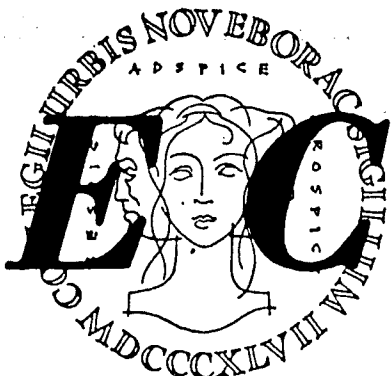


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THE SCHOOL OF ENGINEERING AND ARCHITECTURE

THE CH NEWS

CITY COLLEGE OF NEW YORK

VOL. XX — No. 2

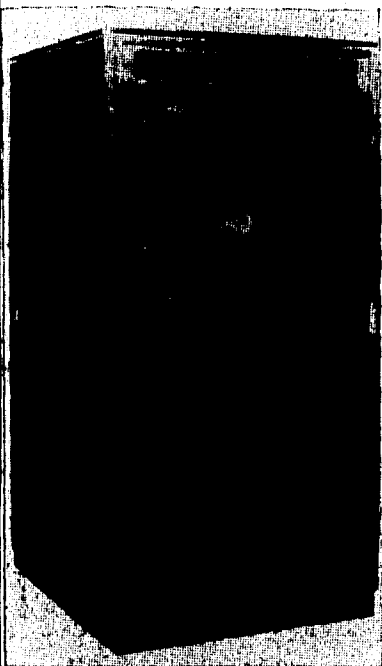
WEDNESDAY, MARCH 4, 1964

STUDENT FEES

Computer Will Aid Registration

By SAMUEL S. EIFERMAN

One of the functions of the new BM 7040 digital computer which the College is to receive in late March will be the selection of
(Continued on Page 2)



Registration "Aide"

Two Final Exam Proposals

"Study Period" Being Considered

By SHELDON ZAKLOW

A faculty committee studying the possibility of a two day "study period" before final examinations has submitted an unfavorable report on the proposal to the college's Review Committee. The Review Committee (composed of President Gallagher and the Deans of the College) has not yet considered the report.

According to Dean William Allan, of the School of Engineering and Architecture, "the Review Committee has not considered the report because it must be considered in relation to other matters which are currently being studied by the faculty and administration. These include a change in class scheduling because of increased enrollment and changes in possible methods of scheduling and conducting final examinations which are related to present staff population and the growth of the final exam scheduling problem in recent years." Dean Allen said that the report definitely will be consid-



Dean William Allan

ered as part of the overall problem of course and final exam scheduling. He said that the continuing growth of the College is causing the problem to become more and more acute, and that "The various departments are studying the whole matter with the Registrar."

The original proposal would have affected only Engineering and Architecture students, but the technology faculty decided that because of overlapping exam schedules the study days would only be possible if instituted on a school-wide basis. A faculty committee with representatives from Engineering, Liberal Arts and Education was then formed to study the proposal. Members of the committee were Professor Gustave Bischof (M.E.), chairman, and Professors Eitzer (E.E.), Hennion (Classical Languages), Wilen (Chemistry), Staal (Psychology), Burke (Education), and Haddow (Education). Registrar Robert L. Taylor was also present at the meetings. The com-
(Continued on Page 5)

North Campus Lounge Delayed

By MARTIN KAUFFMAN

The proposed lounge to be built on the site now occupied by the Army R.O.T.C. supply room will not be ready before next January, it was disclosed recently. Professor Albert P. D'Andrea (Chairman, Art) noted that the bidding on the contract for the structural changes which the new lounge necessitates has not even begun.

He estimated that these changes, which include the demolition of the balcony now used for storage purposes, "will not be completed
(Continued on Page 2)

New Exam Schedule

On February 20, 1964 Registrar Robert L. Taylor submitted a memorandum to President Gallagher proposing a shortened final examination period limited to "multiple section courses in which common examinations at one sitting is necessary." The basic semester class schedules would be used for all other examinations, mainly in single section and "skill" courses. In his proposal Mr. Taylor said "Such examinations would be conducted in regular class hours or lecture hours. The time saved from the present extravagant use of scheduled teaching would revert to class schedules, thereby extending the recitation calendar." Courses that have scheduled examinations would not meet during the last week of recitations, when the other exams will be given.

Mr. Taylor said that "if there is much resistance we would not want to plunge right into it. We will go along with the opinion of the faculty and students on this matter. Bear in mind that we are trying to be helpful, not to introduce stumbling blocks."

Colleges now on quarter or trimester plans use in-class exams exclusively, the Registrar said.

Apart from his new plan, the Registrar recognizes the desirability of a study period before finals. This would be possible if final exams started on a Monday (thereby gaining a two-day study period over the weekend). This could be done, as a stop-gap measure at least, if the College
(Continued on Page 2)

3 Thousand Expected On E & A-Day

By NATALIE COHEN

Work has formally begun on the up-coming Engineering and Architecture Day. After a three year lapse, this occasion is to be held again because, according to Professor Myers of chemical engineering, "At last the School of Engineering has something really fine and impressive to show the general public." This fine and impressive something is Steinman Hall, opened in September of 1962 with its murals in the lobby, new equipment, and modern laboratory facilities.

The exhibit, scheduled for Saturday, April 18, between the hours of ten and four, will feature such equipment as magnetic amplifiers, oscilloscopes, motors, generators, synchronization experiments, displays of electrical engineering and chemical engineering systems, mechanical physics and other laboratories. The lobby will be devoted to Architecture and it is hoped that a model of Steinman Hall can be obtained for display. Drawing boards will also be set up at the sides of the lobby to display architectural drawings. Student are encouraged to devise their own experiments for the purpose of exhibit.

The purpose of E & A-Day is two-fold. Firstly, according to Professor Burns of chemical engineering it is "essentially to bring a better idea of what engineering is all about to the general public." Secondly, according to Bob Amantea (chairman), it is "to give the incoming, unknow-
(Continued on Page 4)

Job Returns Indicate Trouble For Grads

By RICHARD ROSENFELD

The picture of the job situation as painted by the placement office is not a pretty one. All year engineers have been hearing of the difficulty there is in getting hired. According to Mr. C. K. Meyers of the placement office, "Originally we made things seem worse than they were, to orient the engineers to the situation, but unfortunately all our predictions have come true."

Hiring has been the worst since 1958 and the outlook for the future does not show any signs of improvement. Returns from '63 graduates concerning their job status have been slow in coming, an indication of the poor employment situation.

Decreased government spending is generally considered to be the reason for the slow down in hiring, and the entire electronics and aerospace industry has been affected. Examples of industry cutbacks are many. Aerojet General has stopped interviewing east of the Mississippi, and Sperry Rand has just laid off 250 engineers.

The problem must be met by engineering students in different ways. Gone are the days of come one, come all hiring, and new techniques and outlooks must be adopted. Because of the great competition for jobs, seniors who have passed the point of improving grades or acquiring extra-curricular activities must concentrate on their appearance. They must come to interviews well groomed, and

informed about the company they are dealing with.

Attitudes must also be altered. Students in the bottom half of their class should forget about research and development and almost all grads should start thinking about employment out of the New York City area. There is need for engineers in the less common areas of the industry, and this can serve as an alternative for the alert student. There is a demand for technical writers, patent lawyers and marketing and salesmen with technical backgrounds.

Engineers must be realistic, and realize that the best jobs will go to the top students. At present there are conservatively 1200 E.E.'s unemployed in the Metropolitan area and any one wanting a job must be tops or he is bound to be disappointed. Compromise is the watchword for the future.

Following, are the tables of the returns received so far from January graduates. Figures are incomplete.

Number of Total			Average			Civil Grad.		
returns	amount	salary	High	Low	service	school	Military	
E.E.'s	36	\$22,140	\$616	\$700	\$565	5	3	1
M.E.'s	15	\$ 9139	\$609	\$658	\$575	2	1	1
C.E.'s	7	\$ 4253	\$607	\$640	\$558	6	—	—
Chem. E.'s	7	\$ 4269	\$609	\$615	\$595	1	3	—

From Grain to Grads; Meyer Made the Switch

By RICHARD ROSENFELD

As any graduating engineer can tell you, getting a job is the most important thing he has to do. Providing able assistance in this harrowing task are two men, Mr. E. W. Schnaeble and Mr. C. K. Meyer of the City College Placement Office. Mr. Schnaeble, a long-time figure at City College, is familiar to most students, but "Chuck" Meyer, a relatively new addition to the staff, is less well known. This anonymity, it seems will be short lived, for word of his able assistance and winning personality is spreading rapidly.

The 28 year old, blonde, blue eyed placement director came to the College in June of 1962, with a varied and unusual background. Since that time his mid-western drawl and gracious manner have led to much speculation concerning his original home.

Charles Meyer was born and raised in Kansas City, Missouri. When he graduated high school, he entered Kansas State University where he majored in



Mr. Charles Meyer

milling technology. "Only two schools give degrees in milling technology" he explains, "Kansas State and Moscow University." After graduation Mr. Meyer
(Continued on Page 2)

Mech. E. Labs Need Change Meyer...

By SHELDON ZAKLOW

The Mechanical Engineering Department laboratories have been source of much student dissatisfaction in recent terms. Students complain about the small number of actual experiments (the three hour lab period is usually used for recitation when no laboratory exercise is scheduled), the apparently high lab fees (in some courses the fee averages out to more than one dollar per experiment), and the quality and methods of conducting the experiments that are given.

Here is the story as it now stands:

When the new curriculum was being created (beginning in 1957) it was recognized that out-moded labs had to go. These labs centered mainly on the operating techniques of various machines and the checking of various codes and machine ratings. It was decided that a course in the Theory of Experimentation (M.E. 110) should be given, and using the knowledge gained in this course (prediction of errors, randomization, planning experiments, data analysis, data error location, etc.) the students were to design and analyze their own experiments in subsequent lab courses. The experiments were to have much more of an "experimental" flavor. This has not been the case to date, but the changes are coming. According to Professor Henry T. Updegrave, chairman of the department, teachers who now teach laboratory courses will be assigned to teach M.E. 110 as well, in order for them to become oriented to the "theory of experimentation" philosophy. This will probably begin in the Fall Semester.

The number of experiments in the curriculum will increase as more of the staff becomes educated to the "110 philosophy," and as new equipment becomes available. In the last 3-4 years, the M.E. department has spent over \$100,000 on equipment and supplies. Most of the equipment coming in now will go to graduate and research work, but the Thermodynamics and Heat Transfer labs will also be getting new material.

Professor Updegrave said also



Professor Updegrave

that "Labs being integrated with classroom work does not mean a three-hour lab period each week, as in the old 1-credit lab courses. Labs are to be an integrated part of the course where it is proper that some laboratory experience be gained." He also said that ultimately there will be about five or six laboratory experiments in each lab course.

Prof. Updegrave explained the lab fees as follows: A certain amount of money is needed per student for all the labs in the curriculum. This amount is divided by the number of labs to give the uniform four dollar lab fee. This is done for administrative reasons. As a result, sometimes the student gets more than he pays for, and sometimes less.

According to Prof. Eugene Avallone, who is in charge of the use of the lab fees, the department gets only 90% of the money collected. The other 10% is retained by the bursar to cover administrative costs. Every penny of money that the department actually gets is used to buy laboratory equipment and supplies, to replace that which is used up or wears out. This includes steel and other metal stock, tools, instruments, gasoline, and material for metallurgical specimens. None of the money is used for anything but lab supplies.

As to the speed with which the various changes and modifications are taking place, Prof. Updegrave said, "It will probably take some time yet for the complete change to be accomplished. It is purely a case of 'Rome wasn't built in a day'."

Computer Aids...

(Continued from Page 1)

courses to be offered for the coming semester.

Professor Ming L. Pei, (C.E.) stated that "this term the election card system will be done using both the old way and the new IBM 7040, and next term it will be done using only the IBM 7040." Previously student aides tallied the courses by hand.

Use of the IBM 7040 is intended to improve the election card system. Since the computer can handle this job in less time than it took the student aides, and with more accuracy, one of the good points of this new system is that students will have more time in which to file their election cards, and therefore students will know more accurately what subjects they will be taking. In the future, there is a possibility that the computer will be used for pre-registration.

Professor Pei became interested in the new computer when Dean White asked him to take over the programming chore. He is presently making the final preparations for the use of the computer.

Along with the IBM 7040 will come five IBM 7330 Magnetic Tape Units, which can read or

write from 7,200- to 20,000-characters per second; one IBM 1402 Card Read Punch, which has a reading speed of 800 cards per minute, and a punching speed of 250 cards per minute, and one IBM 1403 Printer, which has a maximum printing speed of 600 alphameric lines per minute.

The College will be able to use the computer with two languages, the Fortran language (used as a standard by IBM) and the MAD language (developed at the University of Michigan, and used at several universities throughout the nation). The College has been communicating with Professor Galler of the University of Michigan, who is one of the authors of the MAD language. His advice on programming the 7040 is being used by the College. Presently, Dr. Richard Hamming, of the Bell Telephone Labs, an authority on numerical analysis, is teaching advanced theory of programming to our programmers.

Starting April 8th, and continuing for five weeks, the College will offer special lectures on how to use the computer. They will be held Wednesday at 4 P.M. and Thursdays at 5 P.M.; there is no formal registration for the course.

(Continued from Page 1)

er went to work for the Continental Grain Co. "I always wanted to go into the grain business, and I spent a few summers working in grain operations around the country. I worked in Oklahoma, Colorado, Tennessee, and came as far east as Buffalo, New York."

In 1959 his job called for Mr. Meyer to come to New York City. Then, a slack in the grain industry led to the layoff of many trainees, including Mr. Meyer. He then went to work for I.B.M. Eventually, news of an opening at City College reached him and Chuck made the decision to try his hand in a new field. Although inexperienced in job placement work, he learned quickly. "I had the whole summer to learn, and an excellent tutor in Mr. Schnaeble."

Mr. Meyer says he likes this job very much, but is considering going into personnel relations "if the right opportunity comes along at the right time." He would like to work in the west, since his family is in Kansas City.

Those students who have come in contact with Mr. Meyer have only praise for him. A typical remark was made by Robert Madonia a senior in electrical engineering. "Mr. Meyer helped me to organize my resume so well, that I was impressed with myself when I read it."

As long as he stays students can be assured of friendly and dedicated service when looking for a job.

Lounge...

(Continued from Page 1)

before sometime next fall." These structural changes, Professor D'Andrea stated, will cost approximately \$10,000. This money will come from the city's Capital Budget. In addition to the structural changes, the supply room will have to be completely remodeled in order to serve as a lounge. This will delay its opening for at least another month.

Larry Klaus '64, President of Tech Council, who has worked on the North Campus lounge project for the past year and a half, envisioned a lounge with such niceties as wood panelling, carpeting, high quality furniture, and hi-fi equipment. He said that these unusual extras could add an additional ten to fifteen thousand dollars to the gross cost of the lounge. The monies for furnishing lounges cannot be allocated from the city's capital budget, which only covers items concerned with classrooms and teaching expenses. Therefore the problem of obtaining such funds becomes a major one. Larry Klaus mentioned the engineering alumni and the Alumni Association as possible sources of revenue.

The new lounge is designed to accommodate about one hundred students. Along with Knittle Lounge it would bring the total North Campus lounge capacity to 175 students. Larry Klaus said that a "minimum capacity of 300 students is needed... but right now, everything else they're remodeling is for class space." He discounted the possibility that any more lounge space would be available in the foreseeable future.

Meanwhile, Assistant Miliary Property Custodian Piombino said that "the supply room would move to Townsend Harris, into what were the machine shops, about the first of March."

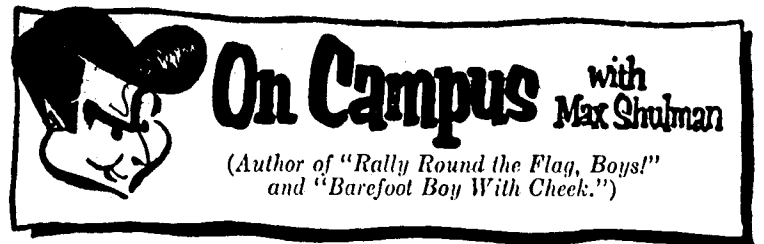
Exams...

(Continued from Page 1)

was willing to start classes on a day other than Monday. An alternate possibility is "if the College were willing to sacrifice certain single-day holidays during the term we could get exams started on a Monday and also have a ten-day examination period. We would need this in order to alleviate room congestion and exam conflicts."

The Registrar's problem is compounded by the size and "clumsiness" of the College. He is "not aware of a really good plan" for final exams but he would tend to favor a completely in-class exam schedule, "because it's less disruptive."

Mr. Taylor said that if his plan is accepted, there would be no strict rule as to which course would have in-class exams and which would have scheduled finals. This would be worked out with the department chairmen.

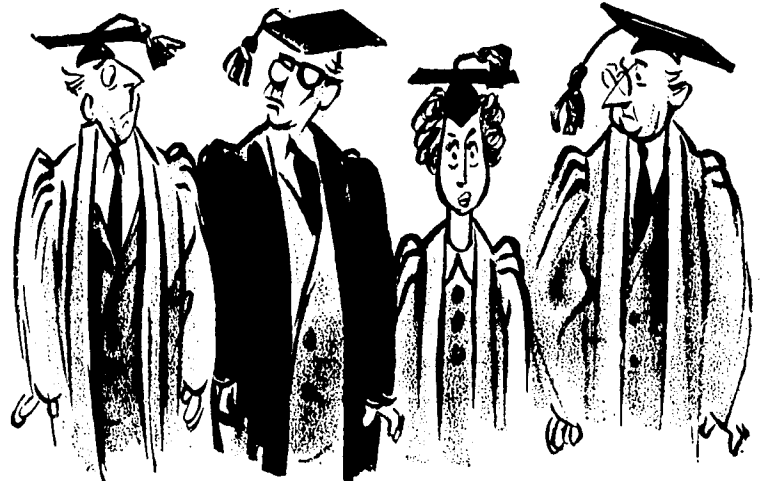


A ROBE BY ANY OTHER NAME

With the Commencement Day just a couple of short months away, the question on everyone's lips is: "How did the different disciplines come to be marked by academic robes with hoods of different colors?" Everybody is asking it; I mean everybody! I mean I haven't been able to walk ten feet on any campus without somebody grabs my elbow and says, "How did the different disciplines come to be marked by academic robes with hoods of different colors, hey?"

This, I must say, is not the usual question asked by collegians who grab my elbow. Ordinarily they say, "Hey, Shorty, got a Marlboro?" And this is fitting. After all, are they not collegians and therefore loaded with brains? And does not intelligence demand the tastiest in tobacco flavor? And does not Marlboro deliver a flavor that is uniquely delicious? And am I not short?

But I digress. Back to the colored hoods of academic robes. A doctor of philosophy wears blue, a doctor of medicine wears



Why, Why?

green, a master of arts wears white, a doctor of humanities wears crimson, a master of library science wears lemon yellow. Why? Why, for example, should a master of library science wear lemon yellow?

Well sir, to answer this vexing question, we must go back to March 14, 1844. On that date the first public library in the United States was established by Ulrich Sigafos. All of Mr. Sigafos's neighbors were of course wildly grateful—all, that is, except Wrex Todhunter.

Mr. Todhunter had hated Mr. Sigafos since 1822 when both men had wooed the beautiful Melanie Zitt and Melanie had chosen Mr. Sigafos because she was mad for dancing and Mr. Sigafos knew all the latest steps—like the Missouri Compromise Samba, the Shays' Rebellion Schottische, and the James K. Polk Polka—while Mr. Todhunter, alas, could not dance at all, owing to a wound he had received at the Battle of New Orleans. (He was struck by a falling praline.)

Consumed with jealousy at the success of Mr. Sigafos's library, Mr. Todhunter resolved to open a competing library. This he did, but he lured not one single patron away from Mr. Sigafos. "What has Mr. Sigafos got that I have not?" Mr. Todhunter kept asking himself, and finally the answer came to him: books.

So Mr. Todhunter stocked his library with lots of lovely books, and soon he was doing more business than his hated rival. But Mr. Sigafos struck back. To regain his clientele, he began serving tea at his library every afternoon. Thereupon Mr. Todhunter, not to be outdone, began serving tea with sugar. Thereupon Mr. Sigafos began serving tea with sugar and cream. Thereupon Mr. Todhunter began serving tea with sugar and cream and lemon.

This, of course, clinched the victory for Mr. Todhunter because he had the only lemon tree in town—in fact, in the entire state of Maine—and since that day lemon yellow has, of course, been the color on the robes of masters of library science.

(Incidentally, the defeated Mr. Sigafos packed up his library and moved to California where, alas, he failed once more. There were, to be sure, plenty of lemons to serve with his tea, but, alas, there was no cream because the cow was not introduced to California until 1937 by John Wayne.)

© 1964 Max Shulman

Today Californians, * * * among their milch kine, are enjoying filtered Marlboro Cigarettes in soft pack or Flip-Top Box, as are their fellow Americans in all fifty states of this Marlboro Country!

Link Water Heart

By JOS

Did you know a definite water you disease? Theratistical evidence may ne cardiovascular

Last July awarded \$750000 research Council took into this ram is unde professor Dav assisting him

Coulter (experts in the engineering and teach the

given by the Department is The program letely statisto computer

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STUDENT

Sponsored on Engineer's on Friday, M Knittle Loun in E-day. Al propriately.

PHOTO

Photograph Harris at 12 Bring pictur ust bring welcome!

STAMP

Stamp and next Thurs Harris. Dr. F will discuss in Europe ar to-get (in Stamps. We to visit INT at a reduced

Eta Kapp

speaker from whose topic Circuit Desi Finley 424, Next wee North Ame discuss "Th pllosion in 5:30 Wedne Both lect entire und body.

Eve

Amate K2YMC, I seur Radio C SSB transr Finley. Lic invited to facilities. R are held e p.m.

ES Hous

Evening Association members in on campus.

Link Between Water And Heart Disease

By JOSEPH BOCK

Did you know that there may be a definite connection between the water you drink and heart disease? There has been some statistical evidence that water hardness may be a factor affecting the cardiovascular disease and death rate.

Last July the College was awarded \$7500 by the Health Research Council of New York to look into this matter. The program is under the leadership of Professor David L. Muss (CE) and assisting him is Professor Richard J. Coulter (CE). Both men are experts in the field of Sanitary Engineering and Water Supply and teach the sequence of courses given by the Civil Engineering Department in this area.

The program is run on a completely statistical basis. Although a computer is being used due to the simple nature of the individual calculations involved, Mr. Thomas Werner, the student research assistant on the project and a senior in civil engineering, noted that "reams and reams" of paper were being used.

Basically the analysis is carried out by comparing predicted death rates in various areas of New York City on the basis of U.S. figures, with actual death rates over a three decade period. If lo-

calities containing hard water show a lower death rate than predicted then this would constitute some statistical evidence for a positive connection between hard water and heart disease.

New York City is particularly amenable to this study because of the availability of both soft water from the Catskills and hard water from various well supplies. The research plan for the project points out "a significant portion of the national population lives within the study area . . . (thus) New York City and its environs may be uniquely situated for testing this hypothesis on a scale that can conclusively indicate its validity."

The results of the study should be available by the end of this week barring any unforeseen circumstances such as a paper clip that fell into an adding machine last week and slowed down calculations for a while.

Professor Coulter stated that work has been done in this field in England and Japan as well as here in this country. These previous studies show that areas with a high calcium carbonate concentration (hard water) have a lower heart disease and death rate than would otherwise be predicted. However, as pointed out by Mr. Werner, at present there are some contradictory theories on the subject.

Who knows what the future may bring in water supply? In a few years they may dehydrate water and sell it in packages.

WBAI Club Presents Films

The WBAI Club will show the following films in 217 Finley at 3 and 4 p.m. except as noted.

MARCH 13

Marian Anderson. Describes the singer's early struggles to her concert in Town Hall. Selections from Handel, Schubert, and other spirituals.

Wanda Landowska. The harpsichordist talks of her life and art and her efforts to gain public acceptance of the instrument of earlier composers. She plays the 3rd movement of the Bach Concerto in D Major and the 2nd movement of the Vivaldi Concerto.

MARCH 20

AI-YE. Experimental film made in Mexico, Cuba and Puerto Rico, interpreting the simplicity of Indian life and the beauty of the jungle.

Pow Wow. Concealed cameras have captured the humor created by a college band as it rehearses in the rain.

Music from Oil Drums. Pete Seeger focuses his camera on this unique instrument and its players, in Trinidad and the U.S.

APRIL 10

White Mane. Albert Lamorisse's presentation of a boy and a wild horse. Winner of the Best Film award at the Cannes Film Festival.

Third Ave El. Our new departed el captured in all of its variety and color. Wanda Landowska accompanies with Haydn's Concerto in D for Harpsichord.

Glass. A poetic documentary that contrasts the art of the glass blower with the dehumanized mechanization of the assembly line. A rich delight of music and image.

APRIL 17

Louisiana Story. The now famous classic film by Robert Flaherty of the adventures of a Cajun boy in the bayous of Louisiana. One showing only, at 3 p.m.

APRIL 24

The Quiet One. Wiltwyck school in New York state helps to readjust a Negro boy whose problems are due largely to parental neglect. James Agee, commentator. 3 p.m. only.

MAY 1

The City. The original version of the screen classic that makes a strong plea for the planning of cities to take care of human needs. Lewis Mumford, commentator; Aaron Copland, music.

The River. The classic documentary of the Mississippi River and its reflection of the conservation needs of the nation. Pare Lorentz for the U.S. Dept. of Agriculture. Music by Virgil Thompson.

Carnival Queen Ball Coming

House Plan Association has announced its new Carnival Queen Ball. This annual event, marking the twenty-fifth anniversary of the Carnival Queen Contest, will be held on the first day of Spring, March 21st, in the Grand Ballroom of the Hotel Edison.

Guests attending this annual event will dance to the music of Al Barrie and his orchestra, and will witness the selection of the Carnival Queen Contest finalists, capped by the coronation of the Carnival Queen of 1964.

In addition, a sumptuous supper will be served at midnight, concluding what promises to be a gala, fun-filled evening. The price is \$9.50 per couple.

Tickets will be on sale from now until March 19th. They will be sold at the following locations: House Plan Office, 326 Finley;

Photo Identification Remakes, for staff members and students, March 10 and 11, from 3 p.m. to 7 p.m. in the Trophy Lounge, Finley Student Center.

The City College Bookstore

(Until March 9);

Knittle Lounge in Shepard Hall.

These locations will be staffed by the members of the Grau Dynasty, Monday through Friday, from 10 a.m. to 4 p.m. One ticket order will reserve a table for one week.

In addition to attending the Ball, any group on campus may sponsor a Carnival Queen Contestant. If you know a girl who has the necessary qualifications—beauty, charm, intelligence—why not give her a chance at all the gifts the Queen will receive. Gail Gottlieb, our 1963 Queen, had a vacation in Bermuda, along with many other valuable gifts.



Last year's finalists for Carnival Queen were (from left to right): Toyo Kikuchi, Kathy Gilje, Gail Gottlieb, Susan Harbator and Ann Schneider.



We hope this doesn't happen on E-Day!

Club Notes

STUDENT FACULTY TEA

Sponsored by Society of Women Engineers and Tech Council on Friday, March 6, 3-5 P.M. in Knittle Lounge, to arouse interest in E-day. All invited. Dress appropriately.

PHOTOGRAPHY CLUB

Photography Club meets in 308 Harris at 12:30 P.M., Thursdays. Bring pictures for discussion or just bring yourself. Everybody welcome!

STAMP AND COIN CLUB

Stamp and Coin Club will meet next Thursday, 12:30 P.M. in 014 Harris. Dr. Herman Cohen (Math) will discuss informally his travels in Europe and display impossible-to-get (in U.S.A.) Red Chinese Stamps. We will also make plans to visit INTERPLEX as a group at a reduced rate.

Eta Kappa Nu will present a speaker from I.B.M. Corporation whose topic will be "Memory Circuit Design and Application." Finley 424, 5:30 today, March 4.

Next week a representative of North American Aviation will discuss "The Technological Explosion in America." Finley 424, 5:30 Wednesday, March 11.

Both lectures are open to the entire undergraduate student body.

Eve. Session

Amateur Radio Society

K2YMC, Evening Session Amateur Radio Club has AM, CW, and SSB transmitters in Room 414 Finley. Licensed operators are invited to visit and operate the facilities. Regular club meetings are held every Friday at 9:00 p.m.

ES House Plan Association

Evening Session House Plan Association has a lot to offer its members in the way of social life on campus. Planned for this term

are dances, socials, folksings, hay rides, parties galors and lots more.

Evening Session House Plan Association would like to extend an invitation to all students at City College (matriculated or non matriculated) to join in its events.

If you are interested in joining our warm friendly groups for our events please contact the E.S. House Plan Association Coordinator, Samuel S. Eiferman at KI 7-4874 or leave a letter in the Evening Session House Plan Association mailbox in Room 152 Finley Center. You can also come to Room 120 Finley Center after 10:00 p.m. on Thursdays and ask for Sam.

Jewish Cultural Society

The Jewish Cultural Society invites all interested students to a gala dance to be held on March 14. It will take place at 8:30 at 2060 Wallace Ave. in the Bronx. The dance at the Roosevelt Community Center will cost 75 cents stag and \$1.25 drag.

NAACP

Smart? Come to the NAACP Thursday Room 348.

International Humor

The International Humor Society will laugh it up as usual in Room 305 Finley on Thursday at 9:00 p.m.

Science Fiction Society

The Science Fiction Society will hold its next meeting on Friday, March 6, 1964 at 8 p.m. in Room 305 Finley. A report of the ESFA Annual Open Meeting will be given, and a proposed film program will be discussed.

Sociedad Cultural Hispano

La Sociedad Cultural Hispana will hold its first meeting Wednesday at 9:00 p.m. in Room 307 Finley. All students are invited.

INTERESTED IN G.E.? E.E. and M.E. June and August 1964 graduates:

Explore General Electric career opportunities with our representatives at group meetings Friday, March 6 at 3 p.m. or 5 p.m. in room F217.

Training programs, types of engineering assignments, job locations and all your questions will be discussed.

Applications will be accepted AT THESE MEETINGS ONLY for General Electric's Tuesday, March 10 campus interviews.

Placement Office has further details.

GENERAL ELECTRIC
AN EQUAL OPPORTUNITY EMPLOYER



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E-Day And Free Tuition

The importance of Engineer's Day and free-tuition fight should not be overlooked. A poor showing, resulting in adverse publicity, can definitely do no good. On the other hand, a good show can only create a favorable impression and do no harm.

Visitors to E-Day will include alumni and members of industry, besides the general public. The work of the alumni for free tuition is already known; but what position do members of industry and professional fields take? Your guess is as good as ours.

Their influence in and on Albany is also a matter of conjecture, but their indifference to such an important issue is not to be sloughed off.

Steinman Hall is as good a place as any to show the worth of free-tuition colleges; it is our most modern building and includes some awfully impressionable labs.

With less than two months left before Engineer's Day, there is still a chance for you to become an integral part of the festivities. No extra-curricular activity has ever suffered from too many participants, and Bob Amantea and Judi Goldberg, E-Day Chairmen, are not complaining about the lack of work to be done.

If you are a member of a tech group, make sure your group has planned an exhibit. If you want to act as an individual, get in touch with Bob or Judi by leaving your name on the Tech Council bulletin board on the second floor of Steinman Hall.

Yakkity-Yak

The situation in the Tech Library and also in the Cohen Library (that glass and metal structure that adorns South Campus) has reached epidemic proportions. The dangerous malady that is spreading by leaps and bounds is talking. Students transferring here from other schools are amazed at the amount of talking that goes on in the libraries.

The library is a place that should be a haven for those seeking a quiet place to study; it should be the protector of that sacred commodity, silence. Many students cannot study at home and therefore it is their last refuge. Instead of being approximately 100% noise-free, it is rapidly approaching Madison Square Garden as a place to go when your eardrums need rupturing.

Did You Get A Job?

Elsewhere in this issue is the latest employment report. It is incomplete because, to date, only 65% of last term's graduating engineers have taken the trouble to inform the placement office of their situation. These people are shirking a moral obligation to both the Placement Office and their fellow engineering students.

While we cannot reach last term's graduates, we can urge graduating seniors to fill out the "Job Offer Report," keep an accurate interview card and return the card to the Placement Office at the end of the term. This office should also be informed if you plan to go to graduate school or are entering military service.

Remember, the job you save may be your own.

Inquiring Technographer

By CHARLOTTE KAUFMAN

QUESTION: How do you think the relationship between students and faculty can be improved at City College?

WHERE ASKED: North Campus.

BARRY LIPNICK, Upper Sophomore majoring in pre-dentistry: "Smaller classes would greatly improve the opportunities for a closer relationship between the students and faculty. Many of the classes at the College are so large that it is not possible to have any student participation during the class hours. More students should visit their instructors during office hours to discuss topics and ideas which interest them. If students are having problems in understanding the material of a particular course they should go to their instructors for help and advice. Most instructors are very willing to help students and discuss matters of mutual interest with them, but it is up to the student to take the initial step by arranging an appointment with their instructor."



Barry Lipnick



Brenda Marino

BRENDA MARINO, Upper Sophomore majoring in pre-medicine: "The first step in any relationship is the establishment of attitudes. This, I consider the most important consideration in the relationship between student and faculty is the attitude they have for one another. The student tends to think of his teacher as a separate entity, apart from what he considers the normal human race, and therefore judges his professor by rigid and inhumane standards. A change must also be made in the professor's opinion of students. He shouldn't judge his students as if they were experts in the subject, nor should he condescend towards them. These reforms can possibly be accomplished over a long period of time through social contact between students and teachers. At the moment, I can't think of any possibilities of social contact other than club meetings."

MICHAEL ROTH, Upper Freshman majoring in electrical engineering: "I think the relationship between students and faculty is very poor. Personally I have not had the opportunity to talk to any of my teachers in their offices. I would like to but I think this situation is due to the use of the lecture system for many freshman courses. I would like to see teachers who would



Michael Roth

tell you where they can be found. Many of them can not be found when you do want to see them. I would really like to see a committee formed to study the problem of student-teacher relationships. Its report should be printed in this paper."

TEDDY BROWN, Upper Junior majoring in mechanical engineering: "Student-faculty relations certainly need to be improved at City College. The size of the College spoils any possibility of close relations that a smaller college engenders. An enlarged program of student-faculty teas would be just the thing. The teachers could get their prolixity over with and so inform the student body of their verbose characteristics. Smaller classes, of course, are not possible but the trend towards larger ones should be inhibited."



Philip Paskowitz



Teddy Brown

PHILIP PASKOWITZ, Upper Freshman majoring in history: "Student-faculty relations can be improved in many ways. First of all, by having student-faculty individual conferences, the student can learn more of the expectations of the teachers and the teachers can learn more of the problems, needs, and abilities of the students. While this arrangement is used in some departments and by some teachers, it is not universal at City College. Further student-faculty meetings in the forms of out-of-class teas, meetings, and gatherings can improve the already strained relationships which exist between students and faculty."

E-Day

(Continued from Page 1)

ing student an idea of what he is to expect, because there is more to engineering than just textbooks and study. I went in blind and I wish I had known what was in store. The use of equipment, and in this case seeing it operated, is a way of applying the things you've learned and will learn. It will definitely increase the students' interest, and for that matter the spectators' interest."

About a hundred students must be provided to guide the expected two to three thousand visitors and at least another hundred students will be expected to answer the visitors' questions and to usher them around in small groups of ten to twelve. Faculty members will be present to assist the students, but it will be primarily run and organized by the students. Many engineering students are needed to run the exhibits and it is hoped that enough students will volunteer their services. Professor Myers issues the following edict: "Anyone who doesn't volunteer is a deadhead and the fact that he didn't will influence the professors when the time comes for job recommendations after graduation."

The idea for a City College E & A-Day was proposed by Herb Geller, chairman of Tech Council, at one of their meetings. Herb felt that enough engineering societies were interested and since there hadn't been one since Spring of 1961 it was about time for another. He therefore, appointed a group of students from the various engineering departments to get things under way. Among the appointed leaders are: Bob Amantea (chairman), and Judi Goldberg (co-chairman). Herb is publicity man. Notification of E & A-Day has been sent to newspapers, radio, high schools and various other engineering or-

Award

THE TWELFTH ANNUAL THEODORE GOODMAN MEMORIAL

SHORT STORY AWARD

The Theodore Goodman Memorial Award has been established to honor the memory of Professor Theodore Goodman who for many years taught the narrative writing courses at City College. To carry out this purpose the Goodman Memorial Fund has this year allocated \$250 for rewarding distinguished achievement by an undergraduate in the field of the short story.

Each contestant is requested to observe the following:

Eligibility

The award is open to all regularly enrolled undergraduates of the City College.

Manuscripts

No more than one story (600 word maximum) may be submitted by any contestant. The story must be typed double-space on one side of 8 x 10 white paper. A carbon copy should be retained by the contestant. The author's name must not appear on the manuscript or on the envelope containing the manuscript. The author's name, class, home address and phone number should be typed on an index card and placed in a small white envelope which should then be sealed and attached to the manuscript. Manuscripts should be left or sent to the Goodman Memorial Award, the English Department of City College, Convent Avenue at 139th Street, New York 31, N.Y.

Deadline for Manuscripts

All stories must be in the hands of the Award Committee by noon of Thursday, April 16, 1964.

Award Announcement

The decision of the judges will be announced publicly within several weeks after the close of the contest. Winners will be notified by mail.

Return of Manuscripts

Contestants will be able to retrieve their manuscripts by calling at the English Office, Room 310 Mott, after the final decision has been announced. Stories will be held until the end of the present semester. Thereafter the Committee assumes no responsibility for the safekeeping of the manuscripts.

S.G.

STUDENT GOVERNMENT SPECIAL ELECTION

Elections to be held:

Wednesday-Friday, March 11-13

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Knittle Lounge, opposite 15th Finley

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Class '64 Treasurer

Class '64 Secretary

Class of 1965

Class '65 Council — 1 vacancy

Class of 1966

Class of '66 President

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Class of '66 Treasurer

Class of '66 Secretary

Class of '66 Council-4 vacancies

Class of 1967

Student Council — 1 vacancy

Class of '67 Treasurer

Class of '67 Secretary

Class of '67 Council-4 vacancies

Submit a written statement of your candidacy to the Student Government office.

organizations. Tech News will publish a feature issue giving more details about E & A-Day in the future.

Vector Review

By HARVEY HOFFMAN

There are certain actors and actresses who are so unusually competent that one subscribes to tickets for a play in which they star without bothering to await the critics' appraisal of the show. Indeed, in all fields of endeavor there are certain people, places or things that can consistently be expected to yield a high degree of excellence. Such an unusual "final" is VECTOR, the CCNY Engineering Magazine.

VECTOR's philosophical angry young editor, Larry Presser, continues his soul searching editorials by asking us to investigate ourselves a little more now and then. Although one may not necessarily agree with his reasoning, certainly does present "food for thought" in his editorial entitled "On Science, Scientists and Common Sense."

X-ray Diffraction

This issue's feature article is entitled "X-ray Diffraction Crystals." This is the first of what may be a series of articles on crystal structure and X-ray electron diffraction. X-ray diffraction is a non-destructive technique which can be used to examine a crystalline material of only slight dimensions. This is an unusual article for VECTOR in that most articles that appear in the magazine do not involve original research, but, rather only a summary of findings in industry. Victor Greenhut, the author of this article, has combined ideas that have been developed in the field and placed in his own laboratory work. In fact, he took most of the figures that appear in the article and also did research to compile the data that appears in the charts. It is apparent that a great deal of effort has gone into the preparation of this article and for this reason alone it should be read. It can be expected that physics and chemistry students and their instructors will find this article most worthwhile.

Geophysical Survey

"Before the construction of a highway can begin, a geophysical survey must be conducted to obtain a knowledge of the underlying soil conditions. The survey must determine the type of soil, general formation, and the particular location of subsurface phenomena. Presently, two methods of geophysical survey are in use: seismic and resistivity." Thus, John J. Giudice begins his article entitled "Geophysical Survey By Seismic and Resistivity Methods." As the title of the first paragraph imply he divides the article into two parts first discussing one method and then the other. This feature is presented in a clear and concise manner and should be enjoyed by all who read it.

"Inert" Gas Compounds

"Preparation, Properties and Reaction of the Noble Gases," written by David Zinamon is highly technical work dealing with compounds of the noble gases (helium, neon, argon, krypton, xenon and radon). These gases "should not react with any other element by normal chemical means. However, this theory was considerably shaken as recently as October, 1962, when a compound of an inert gas was synthesized." Mr. Zinamon then goes on to discuss various xenon complexes. This feature will only be appreciated by chemistry and chemical engineering students and faculty. It requires a substantial understanding of how chemical bonds are formed and at least a rudimentary knowledge of the properties of the noble gases.

Summing Up

In addition to these feature articles there are the usual "Vector Volts," a crossword puzzle and six "Faculty Profiles." There are also several interesting "Engineering Highlights" including one on "a molecularized television camera that weighs only twenty-seven ounces."

Larry Presser, Herb Geller and the rest of the VECTOR staff have once again published a fine issue. The magazine will go on sale during the week of March 16.

Proposal...

(Continued from Page 1)
The committee met three times during the first Semester and submitted its report on January 7, 1964.

The proposal originated in the Student Faculty Relations Committee in the School of Engineering and was submitted to the En-

gineering faculty by that committee.

Prof. Bischof said that the Technology representatives on the faculty committee were strongly in favor of the plan but were unable to bring a majority of the committee over to their point of view.

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ARCHITECTURE

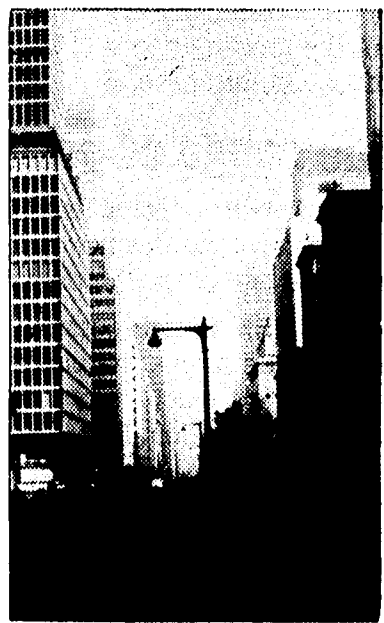
By SECUNDINO FERNANDEZ and ENOCH LIPSON

Professor Hanford Yang, of the Architecture department, has begun an interesting experiment which so far has proven very successful. "Good urban design," Professor Yang said, "is not a simple task to be done only at the drawing board. The design must be studied for the specific area in which it is to be built. The architect must study the neighborhood, and observe the people who live in it. The building must fit its environment for it has been said that the buildings form the neighborhood; the neighborhoods form the city; and the character of the city expresses its civilization. Therefore when one understands the buildings of a society one will understand its structure."

Professor Yang has therefore proposed that visits and trips to different parts of New York and other cities might prove helpful to architectural students. Our initial trip was a study of Park Avenue and its destruction.

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The walk began at the intersection of Park Avenue and 34th Street. Looking south toward Madison Square, the clear definition of the street pattern can be observed. This is created by many buildings similar, though not identical, in height (about ten



Park Ave. looking north

stories) and material (brick), which are all built right on the property line. The canyon formed is an interesting and beautiful urban space enhanced by the slight variations in window pattern and brick color.

Unfortunately, the character of the avenue has not been respected. Its street pattern, so well defined south of Grand Central, is rapidly being lost in a maze of cold and meaningless setbacks of

the new structures to the north. Some commercial buildings have pretentiously created sidewalk plazas of their own, as if their owners were modern Medicis creating parks for the poor, poor public. The designers have attempted to enhance these rather cold areas (i.e. the Seagrams' Plaza) with pools of water and trees. This seems rather nice until the water leaks through to the garage below and the trees slowly die, limply hanging from their guidewires. It seems that nature may be right. Trees and water belong in the ground, in earth, not concrete.

The flow of the street is also impeded by the destruction of the scale of the neighborhood. Not only has glass replaced brick, but mountains have replaced midgets. No one would wish for total uniformity within a neighborhood, but chaos is no blessing either. The perfect example of all these faults and several more is the already infamous Pan Am building. Pan Am seals the avenue in much the same way a cork seals a bottle of wine. The only problem is that there isn't a large enough corkscrew around. Looking at it from the avenue on one side, it's impossible to imagine that anything is continuing on the other side. The old Grand Central Tower was a climax which enhanced the pattern of the avenue; now it looks like a piece of cardboard hung on the Pan Am's facade. The Pan Am building is so huge that all detail is lost. Even the precast concrete panels which form the exterior wall become so lost that they look like parts of an aluminum curtain wall.

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Tech Societies Offer Varied Programs

AIAA

The American Institute of Aeronautics and Astronautics is a national professional society dedicated to the advancement of arts, sciences and technology right in and beyond the earth's atmosphere. Included in its scope are such diverse fields as structure, propulsion, aerospace medicine, testing, guidance and navigation, astronautics and aerodynamics, space and atmospheric sciences, and communications. Its 100 members include virtually all of the leading scientists, engineers and technical managers of the country's aerospace program. Student membership in AIAA carries with it many opportunities for professional development through contact with current technical progress and the people behind it. Members receive several free technical and semi-technical periodicals, and may subscribe to others at nominal rates. They may attend AIAA national technical meetings and section meetings, and present their own work at regional student conferences or submit it for publication in the AIAA Student Journal. Student branches located at over 100 educational institutions conduct many additional activities, including field trips and regular programs featuring films and speakers from industry. Outstanding student members are eligible for Branch and National awards. Membership in the City College Student Branch is open to matriculated undergraduates and graduate students regardless of major. Applications for further details are available at all AIAA meetings, or drop a note in the AIAA mailbox in room 302.

Meetings are held Thursdays, 8:00-2 P.M.; rooms are listed in newspaper Club Notes and on posters.

Members pay three dollars per year national dues, plus local dues (now three dollars a year at NY); special reduced rate available to freshmen and sophomores.

ASCE

Membership in the City College chapter of the American Society of Civil Engineers is open to all students who express an interest in the field of civil engineering. The College's chapter, established and maintained by the parent organization, aims to be a supplement to regular laboratory and classroom work, and also a means by which the Society keeps in constant touch with the education of future engineers.

Membership in ASCE is considered to be the first step on the

way to professional development; the Society seeks to lay the foundation upon which the professional man will someday be raised. On the college level, it provides an opportunity for the beginnings of professional associations with fellow students and with men who have distinguished themselves in the field. Each member of ASCE is in contact with the technical and professional progress of civil engineering through various publications, meetings, and national conventions.

Student meetings are often given over to guest speakers on technical or professional subjects. Movies and slides aid in giving the student an idea of the problems and projects he will encounter when he graduates. Field trips to points of engineering interest provide a first-hand view of work in progress. Chapter activities also include various social functions, dances, and smokers throughout the year.

Further information about ASCE can be obtained at any of the weekly meetings, which are announced in the student newspapers.

ASME

The American Society of Mechanical Engineers provides information to mechanical engineering students on the latest developments and techniques in industry. Lectures are frequently given to ASME members on Thursdays, during the 12-2 break.

Members of ASME receive such benefits as the "Journal of Mechanical Engineering," monthly, discounts on technical publications, and free admittance to mechanical engineering society meetings in New York.

In addition to its professional activities, ASME has occasional parties or dances. Dues are five dollars per year for membership in the national organization.

IEEE

The student chapter of the Institute of Electrical and Electronics Engineers is the largest tech organization on campus. The group invites representatives from industry to address them, and answer questions about opportunities and employment in their respective firms. These lectures cover current topics in electrical engineering and serve to keep students up to date with the expanding field of technology. To enable members to become better acquainted with outstand-

ing members of the faculty, the IEEE invites instructors from the E.E. department to lecture on the vast field of electrical engineering, or one of its particulars.

IEEE meets every other Thursday at 12:20 p.m. either in Steinman or Harris Auditorium. Consult the "Club Notes" section of school newspapers or posters placed in north campus buildings for specific information. The next meeting is scheduled for March 5 at 12:20 p.m. in Harris Auditorium. Three representatives from industry will lecture and answer questions from the floor. Membership is still open for this term and students wishing to join are invited to do so.

A one-day field trip has been planned for March 31, but destination is as yet undetermined.

The organization is taking an active part in setting up exhibits and demonstrations for "E" Day, April 18. Faculty assistance on problems concerning exhibits is being provided through the organization.

The IEEE is playing host to E.E. students in the greater metropolitan area during the annual "Student Activities Day" on May 2. It will feature a "prize paper" contest with six monetary awards, a tour of Steinman Hall, a guest speaker, and a full course dinner.

An annual farewell dinner attended by members and faculty will be held immediately after finals in Finley Student Center.

A membership fee of one dollar (\$1.00) per term entitles students at the College to membership. It is the policy of the IEEE to open meetings to all interested students, but other events planned are free only to members.

SAE

The Society of Automotive Engineers is a technical society whose purpose is engaged in the "design, construction and utilization of self-propelled mechanisms, prime movers, components thereof, and related equipment." The student branch through its meetings will try to keep the student up-to-date with the latest developments in the related fields of mechanical engineering.

Through student enrollment, the SAE provides the student with tools which when properly used, will help him to advance as an engineer. Among the benefits of student enrollment are the following:

a subscription to the SAE Journal — 12 copies/year;

an opportunity to purchase other SAE Publications at re-

duced rates; accessibility to the student branch room — which contains many papers given at SAE meetings throughout the country; and the free use of the SAE Placement Service. (SAE Enrolled Students are eligible, without charge, to make use of the service in seeking summer jobs and positions after graduation).

SAE Student Enrollment is only \$3 per year plus \$0.50 per term for student branch dues.

Future events will include: a speaker from Grumman Aircraft to talk on the Apollo Project; a speaker from the Civil Engineering Council; and a movie schedule is also planned.

Membership in the SAE is open to all mechanical engineering students.

SAME

The Society of American Military Engineers, City College Student Post was chartered in 1950. It is one of sixty Student Posts in colleges throughout the country. These Student Posts are affiliated with national SAME, with headquarters in Washington, D.C. National SAME has awarded the "Best Distinguished Student Post" award to the CCNY Post for the past seven years, a record which is unparalleled in all of the other fifty-nine Student Posts.

Meetings are held every Wednesday evenings in Harris 003, at 5 p.m. These meetings feature speakers from such varied fields as: the Verrazano-Narrows

Bridge, crime detection, missiles, and air defense.

Each term the Society goes on trips to Army and civilian engineering installations. Recently trips have been made to Washington, D.C., Buffalo-Niagara, West Point, Wallops Island, Va., Groton, Conn., and White Sands, N.M.

Membership is open to all ROTC cadets, infantry and engineer, and to all engineers and architects. If you are interested in membership just ask anyone in uniform wearing a red, white and black shoulder cord.

SCAIA

The College's Student Chapter of the American Institute of Architects had its beginnings in the "Architectural Society," which was founded in September, 1961. In the fall of 1962, the Society became a student chapter of the New York City branch of the national Institute.

SCAIA has a full and varied program for its membership of approximately one hundred students. The local chapter of the AIA is pledged to help the student organization by inviting students to meetings, providing speakers, and helping to acquaint the student architect with the profession that he will enter.

Membership in SCAIA is open to all architecture students; new members are "probationary" members, who are not obligated to pay dues. At the end of the term, if he finds the Society to his liking, a probationary member may become a full-fledged SCAIA member.

education:

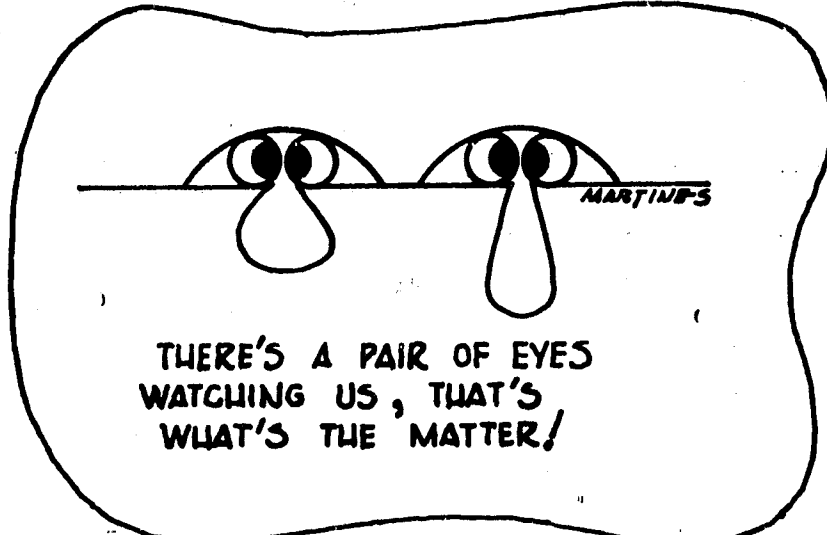
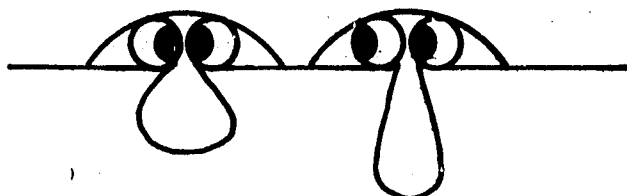
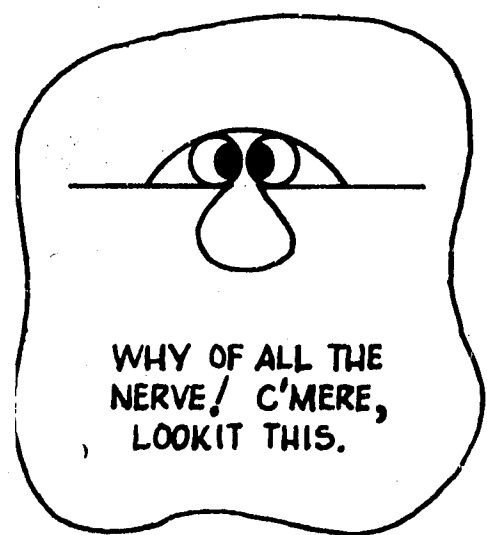
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ARCHITECTURE

By SECUNDINO FERNANDEZ and ENOCH LIPSON

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Park Ave. looking north

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Unfortunately, the character of the avenue has not been respected. Its street pattern, so well defined south of Grand Central, is rapidly being lost in a maze of cold and meaningless setbacks of

the new structures to the north. Some commercial buildings have pretentiously created sidewalk plazas of their own, as if their owners were modern Medicis creating parks for the poor, poor public. The designers have attempted to enhance these rather cold areas (i.e. the Seagrams' Plaza) with pools of water and trees. This seems rather nice until the water leaks through to the garage below and the trees slowly die, limply hanging from their guidewires. It seems that nature may be right. Trees and water belong in the ground, in earth, not concrete.

The flow of the street is also impeded by the destruction of the scale of the neighborhood. Not only has glass replaced brick, but mountains have replaced midgets. No one would wish for total uniformity within a neighborhood, but chaos is no blessing either. The perfect example of all these faults and several more is the already infamous Pan Am building. Pan Am seals the avenue in much the same way a cork seals a bottle of wine. The only problem is that there isn't a large enough corkscrew around. Looking at it from the avenue on one side, it's impossible to imagine that anything is continuing on the other side. The old Grand Central Tower was a climax which enhanced the pattern of the avenue; now it looks like a piece of cardboard hung on the Pan Am's facade. The Pan Am building is so huge that all detail is lost. Even the precast concrete panels which form the exterior wall become so lost that they look like parts of an aluminum curtain wall.

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Tech Societies Offer Varied Programs

AIAA

The American Institute of Aeronautics and Astronautics is a national professional society dedicated to the advancement of arts, sciences and technology in and beyond the earth's atmosphere. Included in its scope are such diverse fields as structures, propulsion, aerospace medicine, testing, guidance and navigation, astronautics and aerodynamics, space and atmospheric sciences, and communications. Its 100 members include virtually all of the leading scientists, engineers and technical managers of the country's aerospace program, and membership in AIAA carries with it many opportunities for professional development through contact with current technical progress and the people behind it. Members receive several free technical and semi-technical periodicals, and may subscribe to others at nominal rates. They may attend AIAA national technical meetings and section meetings, and present their own work at regional student conferences or submit it for publication in the AIAA Student Journal. Student branches located at over 100 educational institutions conduct many additional activities, including field trips and regular programs featuring films and speakers from industry. Outstanding student members are eligible for Branch and National awards. Membership in the City College Student Branch is open to matriculated undergraduates and graduates and graduate students regardless of major. Applications for further details are available at all AIAA meetings, or drop a note in the AIAA mailbox in room 1003.

Meetings are held Thursdays, 8:00-2 P.M.; rooms are listed in newspaper Club Notes and on campus.

Members pay three dollars per year national dues, plus local dues (now three dollars a year at City College); special reduced rate available to freshmen and sophomores.

ASCE

Membership in the City College Chapter of the American Society of Civil Engineers is open to all students who express an interest in the field of civil engineering. The College's chapter, established in 1901, maintained by the parent organization, aims to be a supplement to regular laboratory and classroom work, and also a means by which the Society keeps in constant touch with the education of future engineers.

Membership in ASCE is considered to be the first step on the

way to professional development; the Society seeks to lay the foundation upon which the professional man will someday be raised. On the college level, it provides an opportunity for the beginnings of professional associations with fellow students and with men who have distinguished themselves in the field. Each member of ASCE is in contact with the technical and professional progress of civil engineering through various publications, meetings, and national conventions.

Student meetings are often given over to guest speakers on technical or professional subjects. Movies and slides aid in giving the student an idea of the problems and projects he will encounter when he graduates. Field trips to points of engineering interest provide a first-hand view of work in progress. Chapter activities also include various social functions, dances, and smokers throughout the year.

Further information about ASCE can be obtained at any of the weekly meetings, which are announced in the student newspapers.

ASME

The American Society of Mechanical Engineers provides information to mechanical engineering students on the latest developments and techniques in industry. Lectures are frequently given to ASME members on Thursdays, during the 12-2 break.

Members of ASME receive such benefits as the "Journal of Mechanical Engineering," monthly, discounts on technical publications, and free admittance to mechanical engineering society meetings in New York.

In addition to its professional activities, ASME has occasional parties or dances. Dues are five dollars per year for membership in the national organization.

IEEE

The student chapter of the Institute of Electrical and Electronics Engineers is the largest tech organization on campus. The group invites representatives from industry to address them, and answer questions about opportunities and employment in their respective firms. These lectures cover current topics in electrical engineering and serve to keep students up to date with the expanding field of technology. To enable members to become better acquainted with outstanding

members of the faculty, the IEEE invites instructors from the E.E. department to lecture on the vast field of electrical engineering, or one of its particulars.

IEEE meets every other Thursday at 12:20 p.m. either in Steinman or Harris Auditorium. Consult the "Club Notes" section of school newspapers or posters placed in north campus buildings for specific information. The next meeting is scheduled for March 5 at 12:20 p.m. in Harris Auditorium. Three representatives from industry will lecture and answer questions from the floor. Membership is still open for this term and students wishing to join are invited to do so.

A one-day field trip has been planned for March 31, but destination is as yet undetermined.

The organization is taking an active part in setting up exhibits and demonstrations for "E" Day, April 18. Faculty assistance on problems concerning exhibits is being provided through the organization.

The IEEE is playing host to E.E. students in the greater metropolitan area during the annual "Student Activities Day" on May 2. It will feature a "prize paper" contest with six monetary awards, a tour of Steinman Hall, a guest speaker, and a full course dinner.

An annual farewell dinner attended by members and faculty will be held immediately after finals in Finley Student Center.

A membership fee of one dollar (\$1.00) per term entitles students at the College to membership. It is the policy of the IEEE to open meetings to all interested students, but other events planned are free only to members.

SAE

The Society of Automotive Engineers is a technical society whose purpose is engaged in the "design, construction and utilization of self-propelled mechanisms, prime movers, components thereof, and related equipment." The student branch through its meetings will try to keep the student up-to-date with the latest developments in the related fields of mechanical engineering.

Through student enrollment, the SAE provides the student with tools which when properly used, will help him to advance as an engineer. Among the benefits of student enrollment are the following:

- a subscription to the SAE Journal — 12 copies/year;
- an opportunity to purchase other SAE Publications at reduced rates;

accessibility to the student branch room — which contains many papers given at SAE meetings throughout the country; and the free use of the SAE Placement Service. (SAE Enrolled Students are eligible, without charge, to make use of the service in seeking summer jobs and positions after graduation).

SAE Student Enrollment is only \$3 per year plus \$0.50 per term for student branch dues.

Future events will include: a speaker from Grumman Aircraft to talk on the Apollo Project; a speaker from the Civil Engineering Council; and a movie schedule is also planned.

Membership in the SAE is open to all mechanical engineering students.

SAME

The Society of American Military Engineers, City College Student Post was chartered in 1950. It is one of sixty Student Posts in colleges throughout the country. These Student Posts are affiliated with national SAME, with headquarters in Washington, D.C. National SAME has awarded the "Best Distinguished Student Post" award to the CCNY Post for the past seven years, a record which is unparalleled in all of the other fifty-nine Student Posts.

Meetings are held every Wednesday evenings in Harris 003, at 5 p.m. These meetings feature speakers from such varied fields as: the Verrazano-Narrows

Bridge, crime detection, missiles, and air defense.

Each term the Society goes on trips to Army and civilian engineering installations. Recently trips have been made to Washington, D.C., Buffalo-Niagara, West Point, Wallops Island, Va., Groton, Conn., and White Sands, N.M.

Membership is open to all ROTC cadets, infantry and engineer, and to all engineers and architects. If you are interested in membership just ask anyone in uniform wearing a red, white and black shoulder cord.

SCAIA

The College's Student Chapter of the American Institute of Architects had its beginnings in the "Architectural Society," which was founded in September, 1961. In the fall of 1962, the Society became a student chapter of the New York City branch of the national Institute.

SCAIA has a full and varied program for its membership of approximately one hundred students. The local chapter of the AIA is pledged to help the student organization by inviting students to meetings, providing speakers, and helping to acquaint the student architect with the profession that he will enter.

Membership in SCAIA is open to all architecture students; new members are "probationary" members, who are not obligated to pay dues. At the end of the term, if he finds the Society to his liking, a probationary member may become a full-fledged SCAIA member.

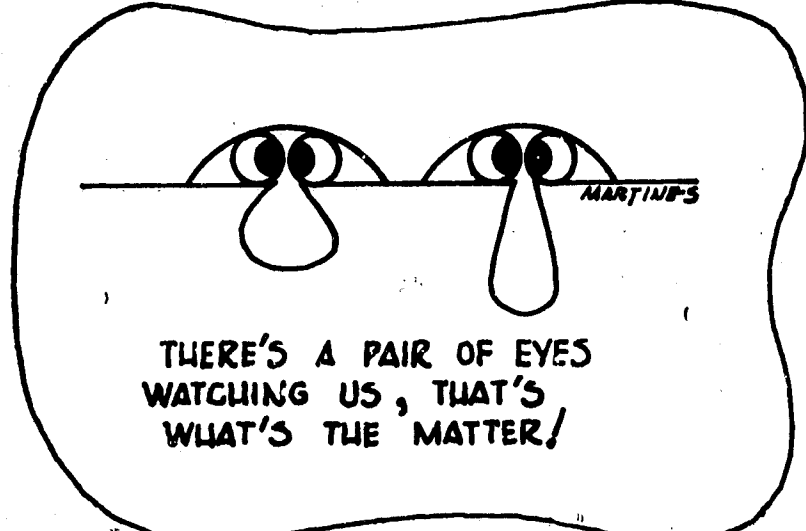
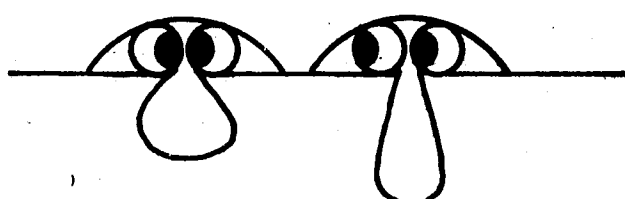
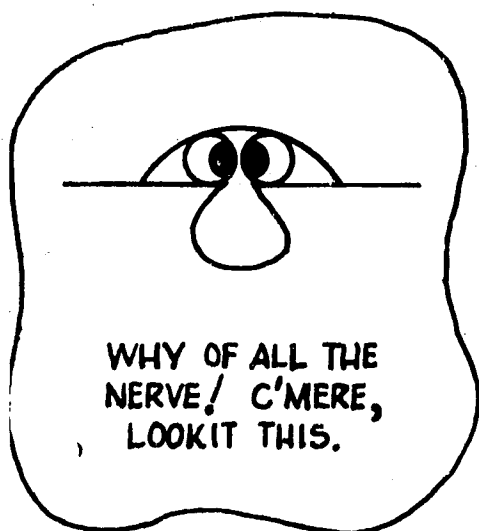
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INDUSTRY TODAY

A new "hot electron" propulsion technique that could be used to propel spacecraft to the farthest planets at speeds of 100,000 miles per hour or more has been developed and successfully tested in the laboratory by scientists of the Radio Corporation of America.

The new RCA system ejects electrons and ions in the manner of a rocket exhaust, at a rate of six miles per second, to generate sufficient thrust to accelerate a vehicle in space over long periods once it has been boosted from earth by conventional rocket power. An experimental unit operated at RCA's David Sarnoff Research Center in Princeton, N.J., has completed a 1,000-hour test, during which it was stopped and started numerous times, without deterioration in its components or its performance.

Dr. E. C. Hutter, head of physical research for RCA's Astro-Electronics Division, said that the 1,000-hour test exceeds the longest operating time yet reported for a space electric propulsion device. As a result, he said, the principles used in the unit open the way to a new family of long-lived electric engines whose ability to stop and re-start on command could extend their operating to missions lasting for several years.

He pointed out that such engines would be practical for many purposes, including the orientation of vehicles in space, shifting them from one orbit to another, or propelling them on long voyages to the edges of the solar system.

"While electric rockets provide an extremely small thrust in comparison to chemical rockets, they do so for very long periods," said Dr. Hutter. "Once a chemical rocket has overcome the force of gravity at ground level to lift a vehicle into space, an electric rocket can take over to produce a small, continuous thrust for months on end. Out in space, such a rocket can accelerate a vehicle to speeds of 100,000 miles an hour or more."

The new RCA device has been developed by Dr. Hans Hendel, a member of the research group under Dr. Hutter's direction. According to Dr. Hendel, the unit employs a new operating principle which overcomes a problem that has tended to limit seriously the operating life of other known developmental electrical propulsion devices.

He explained that all such devices operate by expelling a jet of particles to create thrust, just as a jet engine generates thrust by expelling heated air, and a chemical rocket by expelling hot gas. Electric propulsion engines first break down the atoms of a stable gas into positive ions and negative electrons, creating a new state of matter known as a plasma. In some types of engines, only the ions are accelerated by powerful electrical fields through a thrust chamber and out an exhaust nozzle; in others, both the ions and electrons are accelerated together. This device differs from others in that it directly accelerates only the electrons, using a physical principle known as "cyclotron resonance."

According to Dr. Hendel, it works in this manner:

The electrons in a plasma of an element such as mercury — the "fuel" of the device — are trapped by crossed electrical and magnetic fields. As they spiral around the lines of force in the magnetic field, they absorb energy continuously from the electrical field until they collide with other par-

ticles and scatter at very high speeds in all directions. The only direction in which they can escape from the trap is toward the exhaust nozzle. Therefore, all of them eventually pass out through the nozzle at high speed, and the negative charge of these "hot electrons" pulls an equal number of ions out through the nozzle with them.

Dr. Hendel pointed out that other types of electric propulsion devices require special electrodes which tend to deteriorate in the stream of charged particles. Since the technique applied in the device does not require such electrodes, he said, engines employing the principle should have major advantages in terms of long operating life for extended use in space.

The following additional technical details of the experimental device were provided by Dr. Hendel:

1. A specific impulse of 1000 seconds was obtained with an efficiency (Kinetic beam power over total RF power absorbed) of 30 per cent. Power output was 100 watts.
2. Pump frequency was 2.4 kmc. Confining magnetic field was 870 gauss.
3. System produces ions of 10 ev energy with an electron temperature 1.5 times the ionization potential.
4. Plasma exhaust velocity was 1,000,000 centimeters per second.

Lounge Redecorated

By ROBERT LEVINE

Are you tired of studying in Knittle Lounge?

Do you long for some new vista?

Take heart! Through the generosity of the College's Alumni Association, what was once a comparatively drab Finley Center lounge has been turned into an exotic area for individual study and group conversation.

Tech students may find the Lewisohn Lounge (131 Finley) rather inaccessible for one-hour breaks, but if they can find time for the journey and for the frequent wait for space — the remodeled area seats half the former number — they will be rewarded.

The room now consists of four informal table-and-chair grouping separated by panels decorated with paintings from the Art Collection of the City College Fund. Wall niches feature colorful three-dimensional art pieces, including a floor plan of the room. Large potted plants and table decorations add to the lounge's "living-room" atmosphere.

The redecoration scheme was supervised by Professor William J. Spinka (Art).

Student reaction to the change is varied. Several have criticized the new decor, which makes it impossible to hold dances in the lounge, but most have taken the modernization in stride; as Howard Price '65 noted, "I really don't care where I study."

BOOK REVIEW

Professional Achievement for Engineers and Scientists: How to Earn More Money and Great Success in Engineering and Science by Tyler G. Hicks, Mechanical Engineer; Mechanical Engineering Department, Cooper Union School of Engineering. 364 pages plus index; 9 illustrations; 5-5/8 x 8-3/8; McGraw-Hill; \$7.95. Publication date: July, 1963.

Professional Achievement for Engineers and Scientists is a comprehensive practical guide designed to help the engineer or scientist increase his earning power and improve the quality of his professional achievements through the development of his nontechnical skills.

Using a down-to-earth, how-to approach, the author explains what skills are needed — personal, human relations, managerial, and social — and how they can be developed by the professional engineer or scientist who wants to have outstanding success in his profession. Step-by-step procedures are presented, and the full range of an engineer's or scientist's professional activities are covered — from getting ahead on his job to going into business for himself, contributing more through his professional society, earning money in his spare time, making business travel pay, etc.

Tyler Hicks, a successful engineer, editor, teacher, author, and manager, brings to the book the experience of many years' work with thousands of engineers and scientists in all phases of their profession. The book is a reflection of his sharp insight into the success problems of these men and is replete with check lists, progress quizzes, methods forms, case histories, surveys, and quotations from well-known engineers and scientists and important business men. The variety of techniques are especially designed to show the reader how to earn more, contribute more, and derive greater personal satisfaction from his profession.

"Professional Achievement for Engineers and Scientists" contains many new and up-to-date findings concerning the attitudes of engineers and scientists toward their managers, their jobs, their earnings, and their careers. It summarizes new findings in human relations, planning, delegating, problem-solving, creativity, organizing the workday, and using spare-time activities for professional and personal growth.

The book also covers new techniques for changing jobs without losing pay, methods useful in acquiring a "dream" job (a technical or scientific job offering a guaranteed stock option, annual bonus, freedom of working hours, generous expense allowance, etc.), new procedures in more effective decision-making, and procedures to follow to become a full-time or part-time highly paid consultant in any field of technology or science.

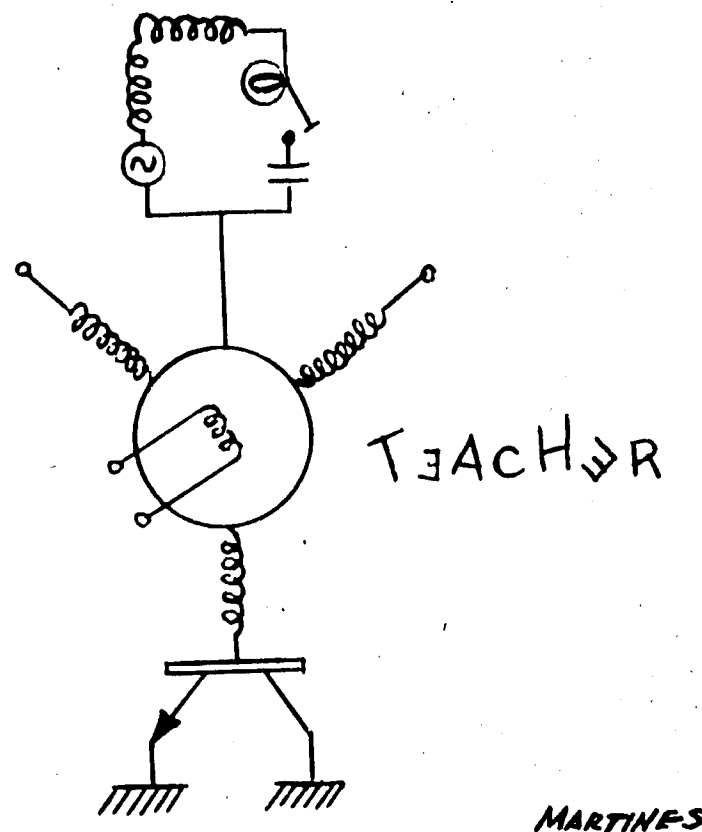
Among the great number of specific, step-by-step procedures presented are: steps to building reading speed; steps to minimize paperwork logjams; springboards to getting good ideas; hints on improving memory; ways to write better technical letters; places to look for a better job; pointers on overseas engineering and science jobs; steps in presenting effective technical or scientific papers; mistakes to avoid when beginning a

consulting practice — and many more.

Tyler Hicks is a graduate mechanical engineer and editor-in-chief of the industrial and business book department of a major publisher. He is Instructor in Mechanical Engineering at The Cooper Union School of Engineering. Author of seven books and over 1,000 articles, Mr. Hicks has

been lecturer at more than seminars on writing, success, achievement in all areas of technology.

Further information on "Professional Achievement for Engineers and Scientists" may be obtained from the McGraw-Hill Book Information Service, West 41st Street, New York, New York.



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