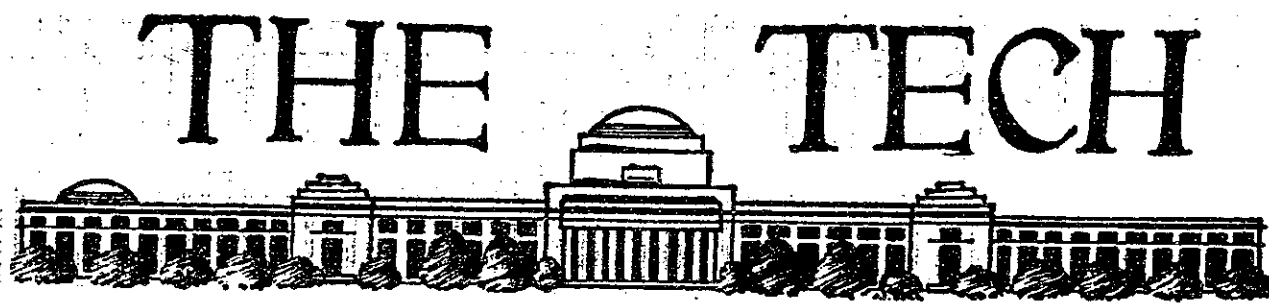


Soccer Team
Wins . . . p. 12



Power Failure
Details . . . p. 11

Vol. 81, No. 19

Cambridge, Mass., Wednesday, October 18, 1961

5 Cents

FIRE RAVAGES WGBH

Block Of Businesses Which Served Institute In \$2 Million Disaster

The studios of WGBH-TV, and seven other business establishments on Massachusetts Ave. opposite MIT's Building Seven entrance were destroyed by a roaring three alarm fire in the early hours of last Saturday morning. Damage was estimated at close to \$2 million.

The blaze was discovered by Robert Mascone, production supervisor of the station, who rushed into the building to save over \$50,000 worth of educational tapes used for the "21 Inch Classroom." Despite this act of bravery, Hartford M. Gunn Jr., general manager of WGBH-TV, estimated the loss to the station to be in the area of \$1 million, with studios on the second and third floors completely gutted.

Fire Chief Present

Scores of firefighters from Cambridge, Boston, Belmont, Somerville, and Arlington responded with more than twenty-five pieces of fire apparatus. Cambridge Fire Chief Vincent Galvin appeared on the third alarm to personally take charge of the fire, and MDC police moved in to reroute traffic on Massachusetts Avenue and Memorial Drive. Hundreds of Tech students and Cambridge residents, many of them in night clothes, watched the flames tower above the building as they fed on highly inflammable film equipment.

Poor Wiring Suspected

Since the studio contained so much electrical equipment, defective wiring was the most likely cause according to the Cambridge fire chief. With the block isolated from neighboring structures, firefighters were able to attack the blaze from four sides without obstruction and keep it from spreading.

WGBH considered moving its FM broadcasting equipment into a vacant WTBS studio, but later decided against the move.

(Please turn to page 7)

Commons To Pritchett As MIT Alumni Invade Walker Tomorrow

MIT Alumni will hear "The Voices of Technology" program, and an address from President Stratton in Walker Memorial, on October 19.

The program will be piped into Kresge Auditorium for the benefit of students and be broadcast on WTBS-AM (640 kc). It will last from 7:45 to 9:45.

As a consequence of the program, commons will be served in Pritchett Lounge.

Voices from the past, present and future will be featured on this nationwide closed circuit telephone program. Dr. Compton and Winston Churchill will be among the voices of the past; President Stratton will speak in Walker and represent the present; computer noises and sounds of outer space will highlight the future "voices."



Fireman battle with the blaze at 5 a.m. Saturday. The fire, which burned all of Saturday morning, destroyed the WGBH studios opposite MIT. — Photo courtesy Boston Globe

Bloy To Stand Trial For Breach Of Peace 8 Months After Arrest

Rev. Myron B. Bloy, Jr., MIT's Episcopal chaplain is slated to appear in a Mississippi court May 10, 1962. He is charged with violating a 1960 Mississippi law which states that if a person's presence in a given locality might possibly cause a disturbance, he may be arrested.

Rev. Bloy, along with 14 other Episcopal parsons was arrested September 13, in a Jackson, Mississippi, bus terminal for violating the new "Breach of Peace" law. The racially-mixed group was involved in a "prayer pilgrimage".

If the county court delivers an "unfavorable" decision, they will appeal to the State Court, and then to a Federal Court if necessary, the group said.

The Episcopal Society for Cultural and Racial Unity sponsored the bus trip.

Rev. Bloy has stated, "We feel that Mississippi has chosen to focus the problem of racial discrimination on itself. We would have preferred that this problem had been focused on the North as well."

He also felt that the trip gave moral encouragement to Southern Negroes.

Merger?

Dr. Julius Stratton, President of MIT, has been elected to the board of trustees of Vassar College, Poughkeepsie, New York. He was chosen by the board at a meeting held Sunday on the Vassar College grounds.

Vassar, along with MIT, observed its centennial in 1961.

Queen Vote Slated

'64 To Elect Prom Committee

Elections for the Junior Prom Committee of the class of '64 will be held on Tuesday, Nov. 7. The committee will consist of eight members, including the three Junior class officers who will be elected during spring term.

All members of the class of '64 are eligible for nomination, and only members of the class may vote. Nomination petitions are available at the Undergraduate Office in Walker Memorial and must be returned, fully executed, by 5 P.M., October 27.

In the near future a meeting

will be called for all candidates. Further information is available from the Secretariat at the Undergraduate Office.

The voting for JP Queen will take place next week in the lobby of Building 10. Voting will begin at 9 a.m. Wednesday, Oct. 25, and continue through Friday.

Pictures of the candidates must be submitted before Oct. 24 at Litchfield Lounge, and all candidates must be dates of male juniors.

Five finalists will be chosen by the voting.

Freshman Statistics Revealed

By Andy Tannenbaum '65
As noted earlier this year in *The Tech*, the class of '65 is statistically smarter than all of its predecessors.

The mean CEEB scores on all the required tests rose between five and 25 points for this year's freshman class.

The mean scores of the class of '65 are as follows: SAT verbal 650, SAT math 728, English Comp. 651, Chemistry 697, Physics 680, and Advanced Math 731. The all-freshman average is 681.

Even the quality of the students who are refused admission is rising. The average CEEB score of the rejected applicants is 593 this year.

According to the statistics released by R. K. Weatherall, Assistant Director of Admissions, a student whose CEEB scores averaged between 750 and 800 stood a 0.99 chance of being admitted. On the other hand, a student whose CEEB's were below 550 stood virtually no

chance at all of being admitted.

Nearly every state and territory, as well as 18 foreign countries, are represented in the class of 896 freshmen. The middle Atlantic states have the largest representation; the New England states are next.

Of the 6828 preliminary applicants, 3886 submitted final applications; 1622 were offered admission, and 884 entered in September. Five hundred seventy-seven of 2064 applicants for financial aid received grants averaging \$1050 or loans averaging \$500.

About 37 per cent of the freshman class has indicated an interest in the School of Science; 45 per cent is considering Engineering. Three per cent is interested in Humanities and Social Science.

Six hundred sixty-nine entering students ranked in the top tenth of their high school graduating class. Only seven were in the lower half.

Russian Dorm Given Right To Show Films Both Weekend Nights

The restriction on weekend Russian Dorm film showings was lifted in a unanimous decision in last Thursday's Activities Council meeting.

On a motion by Jeff Steinfeld '62, the Council decided to lift only the Saturday night restriction by an 8-0 vote. At that point the Council proceeded to complete its discussions on its new constitution.

LSC Asks Reconsideration

Just as the meeting was about to adjourn, however, LSC pointed out that it would like to have the Russian Dorm question reconsidered as they desired to eliminate all scheduling restrictions, leaving the field completely open to competition. LSC's subsequent motion was unanimously passed by the Council.

Constitution Completed

The Council passed its proposed constitution to InsComm Thursday after discussion had been completed. These changes will not come into effect until the constitution has been ratified by the Institute Committee.

Major changes include the creation of five rotating Class B seats in addition to the fifteen already voting Class A activities, and the exclusion of student enterprise groups from the Council's jurisdiction. As was done in the previous constitutional meeting, all Class A and Class B activities voted equally.

Provost Townes Gets David Sarnoff Award: Maser Research Cited

The David Sarnoff Award in Electronics was presented Monday by the American Institute of Electrical Engineers to Dr. Charles H. Townes, provost of MIT and a leading American physicist. The award cited Dr. Townes for research in physics leading to major advances in communication technology.

Noted For Maser

Dr. Townes is internationally known for his work on the theory and application of masers, on which he holds the fundamental patent. Masers are a class of revolutionary new amplifying devices that are being used in communications and other fields of science and technology.

Dr. Townes was appointed provost at MIT last March. He received bachelor degrees in physics and modern languages at Furman University, Greenville, in 1935, a master's degree from Duke University in 1937 and his doctorate in physics in 1937 from the California Institute of Technology. He was a member of the technical staff of Bell Telephone Laboratories from 1939 to 1947, then joined the faculty of Columbia University as associate professor of physics.

On Leave Last Year

Last year, he was on leave of absence from Columbia to serve as vice president and director of research for the Institute for Defense Analyses, Washington, D. C., a non-profit organization operated by MIT and eight other universities.

'Esther' And Illness Delay West Campus Telephone Project

By David Trevvett '65

Personal telephones have long been a dream for Tech men, and now at last they are becoming a reality. In fact, the West Campus phones have already been installed (East Campus has for many years had non-dial personal phones)—there remains but the minor detail of connecting them to the switchboard.

The originally publicized date for the completion of the Burton and Graduate House connections was October 15; now it is with optimism that officials hope the system will be completed by Nov. 1.

Splicing Problems

This delay has been caused by numerous factors, the chief one being difficulty in splicing the main cables. It seems that an expert cable splicer was hired to do the job. Came time for the cables to be spliced and it was discovered that the cable splicer was ill.

Thus it became necessary to find another cable splicer. This was soon done and the date for cable splicing was set. However, to get to the cables he had to work in a manhole which, due to the influence of someone named Esther, was filled with water.

Saturdays Off

The manhole was soon pumped dry (on a Friday) and the next day the cable splicer descended to splice cables; naturally, the manhole was again full of water. This time no pump was available (pumps get Saturdays off) and a pail had to be employed. Needless to say, very little cable splicing was accomplished that day.

Minor incidents, such as this have greatly hindered work on the phone system. Nevertheless, a great deal of progress has been made. The switchboard for Burton and Grad House has been installed in Grad, and the Grad House phones are already working in regard to outside calls.

New System

At this point, a description of the new system is in order. Eventually, when the new phones have been installed in all dorms, any dorm resident will be able to call any other dorm resident from his room. As of November, this will be true for West Campus.

The new system is an internal system, being installed by MIT itself, and cannot be connected with the outside New England phone system. This means that a student will not be able to talk from his room to someone not on the internal system.

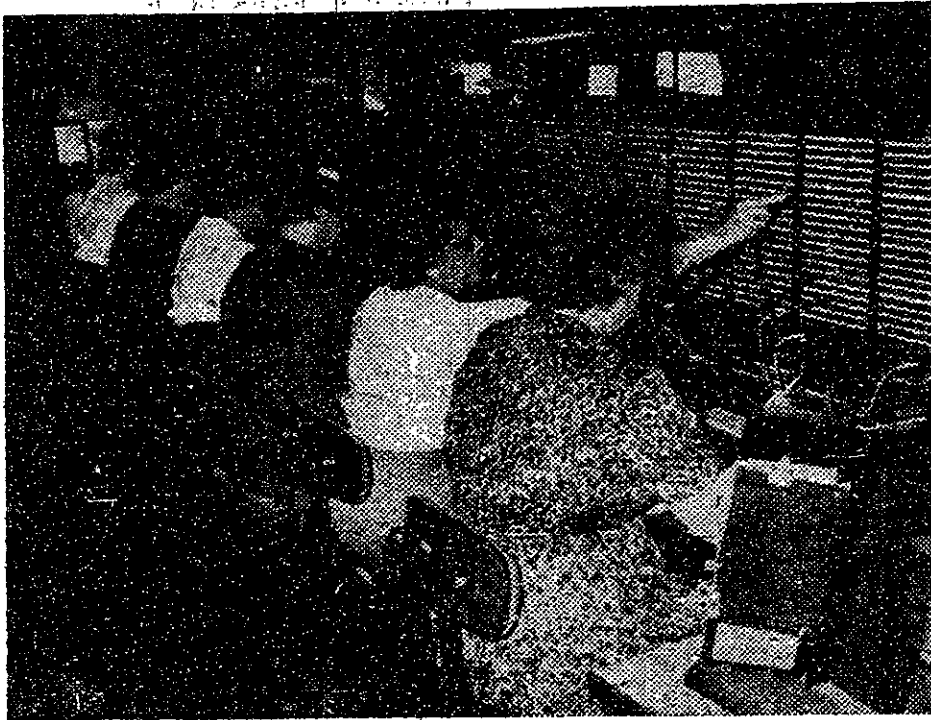
No Mad Scrambles

However, the internal system can be used to locate a student and tell him that he has a call. This will eliminate to a certain extent the trouble of people having to answer the hall phones and then run and find the desired party.

When the operator receives a call for a resident, she will put it on one of several free extensions and then, having contacted the desired party in his room, will tell him to go to the nearest Institute phone (UN 4-6900) and call that extension number, which will be 5111, 5112 or the like.

Start Talking!

This next step is very important: As soon as the person receiving the call has dialed the



— Photo By Scott Graham '65

The heart of the Institute phone system is the main switchboard in building ten. Here we see six of the operators who keep our phone service going.

appropriate extension number, he will be connected with the caller. **THE PERSON RECEIVING THE CALL SHOULD START TALKING AS SOON AS HE HAS DIALED THE EXTENSION.**

Last week this system was inaugurated in Grad House. (Baker House, as most people have probably heard — from Bakerites — already has a working phone system; the Burton phones are still incapable of use.)

Herein lies the difficulty of the system: The incoming caller is waiting while the operator is contacting the desired party; this person is making a call and naturally expects someone to answer.

On the other hand, the desired party has to dial the extension and, having dialed the number, he also tends to expect someone to answer. Thus it has happened that the parties will be successfully connected, but neither one will initiate the conversation. Hence the request that the person being called start talking immediately.

This system will also be used in Burton beginning in November, and eventually on the whole campus. The switchboard for East Campus and Senior House has been set up in the basement of Walker Memorial, and it is hoped that this system will be ready by next summer.

As Professor Carlton E. Tucker, adviser to the treasurer's

office on the telephone system, expressed it, "It's all a matter of money." In fact, money, or rather the lack of it, has been one of the ruling factors in the progress of the system.

At first the Institute was slow to put up money for the project, with the cost of installation in excess of \$50,000, and subsequent costs estimated at three to five cents per call. Nevertheless, there were enough people (including Prof. Tucker and the dorm residents) who wanted the system installed to see that it was.

New Groups Included

As mentioned previously, the phone system will include all on-campus living quarters. Provisions are being made for including the new women's dorm and the new married students' house, both of which are now in the planning stage, upon their completion. If the fraternities move on campus, they may be included in the system.

There is a possibility that the fraternities on Memorial Drive will be cut in on the system if they are willing to pay for part of the cost of installation.

Tetra-Digital Approach

When the new system is put into use it will operate as follows: The numbers will consist of four digits, with the first digit indicating the station. Baker will remain Station 8, Burton and Grad will be Station 9, and East Campus and Senior House will be Station 0.

Grad House will use numbers starting with 97 and 98, Burton those with 92 through 95, etc. However, when calling another party on the same station, one will be able to drop the first digit.

IF YOU WANT TO KNOW...

JPL WANTS TO KNOW...

Representatives of Jet Propulsion Laboratory want to meet with you personally. They want to talk to you about you. About your interests, ambitions and how you feel about science and engineering in general. ○ They want to talk to you about JPL. About 2800 people in Pasadena, California that are mapping out many new missions into space. About JPL's Lunar and Planetary Programs and its three-nation Deep Space Instrument Facility. About the opportunities that exist at JPL for young men who only take know for an answer. ○ JPL wants to know you. We hope you'll find time to meet with us. The Placement Office has full details. ○ "An equal opportunity employer"

JET PROPULSION LABORATORY
 4800 OAK GROVE DRIVE, PASADENA, CALIFORNIA
 Operated by California Institute of Technology for the National Aeronautics & Space Administration

Calendar of Events

THE TECH
WEDNESDAY, OCT. 18, 1961
Page 3

Little, Brown and Company is proud to present the first appearance in book form of FRANNY and ZOOEY, members of a now famous family named Glass created by

J.D. Salinger
author of
The Catcher in the Rye

FRANNY and ZOOEY
Now at your college bookstore \$4.00

LITTLE, BROWN

WEDNESDAY, OCT. 18

Service Sponsored By The Protestant Ministry.
St. Luke's Day, Holy Communion according to the Episcopal Order. M.I.T. Chapel, 12:10 p.m.

Operations Research Center.*
Seminar: "Optimal Priorities in Some Queuing Models." Dr. John D. C. Little, Case Institute of Technology. Room 1-146, 2:00 p.m.

Department of Biology.*
Seminar: "Chondrogenic Induction with a Low Molecular Weight Tissue Component." Dr. Jay Lash, University of Pennsylvania Medical School. Tea in Room 16-711 at 4:00 p.m.

Room 16-310, 4:30 p.m.

Protestant Christian Association.*
Study Group.
317 Memorial Drive, 5:00 p.m.

Seminar Sponsored By The Protestant Ministry.*
Seminar in New Testament Greek. Dr. Goetchius, Episcopal Theological School.
317 Memorial Drive, 7:30 p.m.

Organ Recital.*
First recital of the Organ Concert Series, Andre Marchal, Saint-Eustache, Paris with Chamber Orchestra conducted by Klaus Liepmann.
Kresge Auditorium, 8:30 p.m.

THURSDAY, OCT. 19

Noonday Organ Recital.*
Victor Matfeld, Institute Organist, M.I.T. Admission free.
Kresge Auditorium, 12:15 p.m.

Department of Nuclear Engineering.
Seminar: "Neutron Diffusion in Cylindrical Rods." K. B. Cady. "Recent Work on Nb-Zr Alloy as Material for Superconducting Solenoids." L. J. Donadieu. "Results of Irradiation of Santowax OMP in the Organic Moderator-Coolant In-Pile Loop in the M.I.T. Reactor." D. T. Morgan.
Building NW-12, 138 Albany St., 3:00 p.m.

Department of Aeronautics and Astronautics.*
Fluid Mechanics Seminar: "Chemical Kinetics in Gas Flows." Dr. K. N. C. Bray, University of Southampton and Avco Corp. Coffee in the duPont Room (33-207) at 3:30 p.m.

Room 33-319, 4:00 p.m.

Department of Physics.*
Colloquium: "Recent Developments in Solid State Physics." Professor John C. Slater. Tea in the John Picker Koller Room (26-414) at 3:30 p.m.

Room 26-100, 4:00 p.m.

Department of Mathematics Brandeis-Harvard-M.I.T. Mathematics Colloquium.*
"Group-Like Structure in Topology and Algebra." Professor B. Eckmann, Visiting Professor at New York University. Tea in the Common Room at 4:00 p.m.

Room 2-390 at 4:30 p.m.

Seminar Sponsored By The Protestant Ministry.*
Contemporary drama seminar. Mr. Bloy.
317 Memorial Drive, 5:00 p.m.

Department of Naval Science.*
World War II film series: "Western Battlefront, May-June, 1940." Admission free.
Vannevar Bush Room, 10-105, 5:00 p.m.

Water Polo Club.*
Meeting.
Alumni Pool, 6:30 p.m.

Seminar Sponsored By The Protestant Ministry.*
Seminar on New Patterns in Family Life. Mr. Holtzapfel.
317 Memorial Drive, 7:30 p.m.

Department of Chemistry. Harvard-M.I.T. Physical Chemistry Colloquium.*
"Chemistry of the Rare Gas Ions." Dr. J. L. Franklin, Humble Oil and Refining Company, Baytown, Texas. Room 4-270, 8:00 p.m.

FRIDAY, OCT. 20

Department of Chemical Engineering, 10.991 Seminar
"Flame Spread on a Solid Fuel." Frank R. Steward. Room 4-160 at 3:00 p.m. "Contact Angle Hysteresis on Gel Surfaces." Sheldon W. Dean.
Room 12-102 at 4:00 p.m.

Department of Mechanical Engineering.*
Seminar: "Non-Linear Vibrations." Professor V. O. Kononenko, University of Moscow. Coffee in the Miller Room at 3:00 p.m.
Room 3-270, 3:30 p.m.

Technology Catholic Club.*
Philosophy Lecture Series: "Logic and Method." Father William Wallace, O.P.
Room 3-133, 5:00 p.m.

Lecture Series Committee.
Classic Film Series: "Rain." Admission by subscription ticket only.
Room 10-250, 6:30 & 9:30 p.m.

Technology Catholic Club.*
Dance. Admission \$1.00. Refreshments. Music by George Graham.
Burton House Dining Hall, 8:00 p.m.

SATURDAY, OCT. 21

Lecture Series Committee.*
Entertainment Film Series: "I'm All Right Jack." Admission 30c.
Room 10-250, 5:15, 7:30 & 9:45 p.m.

Concert.*
Joint M.I.T. Musical Clubs Concert. Admission free.
Kresge Auditorium, 8:30 p.m.

Graduate Student Council.
Informal Dance. Admission \$1.50 per couple. Music by George Graham.
Faculty Club, 8:30 p.m.

SUNDAY, OCT. 22

Protestant Christian Association.
Breakfast for Protestant Students. West Dining Room, Graduate House, 10:00 a.m.

MONDAY, OCT. 23

Applied Mathematics and Mechanics Colloquium.*
"Saturn's Rings." Sir Harold Jeffreys, Cambridge University. Tea in Room 2-290 at 3:30 p.m.
Room 2-390, 4:00 p.m.

Seminar Sponsored By The Protestant Ministry.*
Inquirers Seminar. Mr. Ihde. Spofford Room, 1-236, 5:00 p.m.

Choral Society.*
Rehearsal.
Kresge Auditorium, 7:30 p.m.

TUESDAY, OCT. 24

Computation Center.*
Seminar: "Time-Sharing on the PDP-1." Mr. William Fletcher.
Room 26-168, 3:00 p.m.

Department of Metallurgy.*
Colloquium: "Adhesion." Dr. J. J. Bikerman, Department of Civil and Sanitary Engineering, M.I.T.
Room 6-120, 4:00 p.m.

Technology Catholic Club.*
Theology Lecture Series: "Why Christ Died." Father William Sullivan, C.S.P. Discussion at 4:30 p.m.
Room 3-133, 5:00 p.m.

Protestant Christian Association.*
Study Groups.
317 Memorial Drive, 5:00 & 7:30 p.m.

Water Polo Club.*
Meeting. Alumni Pool, 6:30 p.m.

WEDNESDAY, OCT. 25

Operations Research Center.*
Seminar: "Managerial Decision Making - A New Theory." Professor E. H. Bowman, School of Industrial Management, M.I.T.
Room 1-146, 2:00 p.m.

Department of Nuclear Engineering.*
Seminar: "A Summary of the Experimental and New Miracle Physics Performed in Support of the Design of the High-Temperature Gas-Cooled Reactor." Dr. N. F. Wikner, Research Staff Member, General Atomic.
Building NW-12, 138 Albany St., 4:00 p.m.

Department of Biology.*
Seminar: "Gene-Protein Relationships in Human Hemoglobin." Dr. Corrado Baglioni. Tea in Room 16-711 at 4:00 p.m.
Room 16-310, 4:30 p.m.

Technology Catholic Club.*
Meeting. Miller Room, 5:00 p.m.

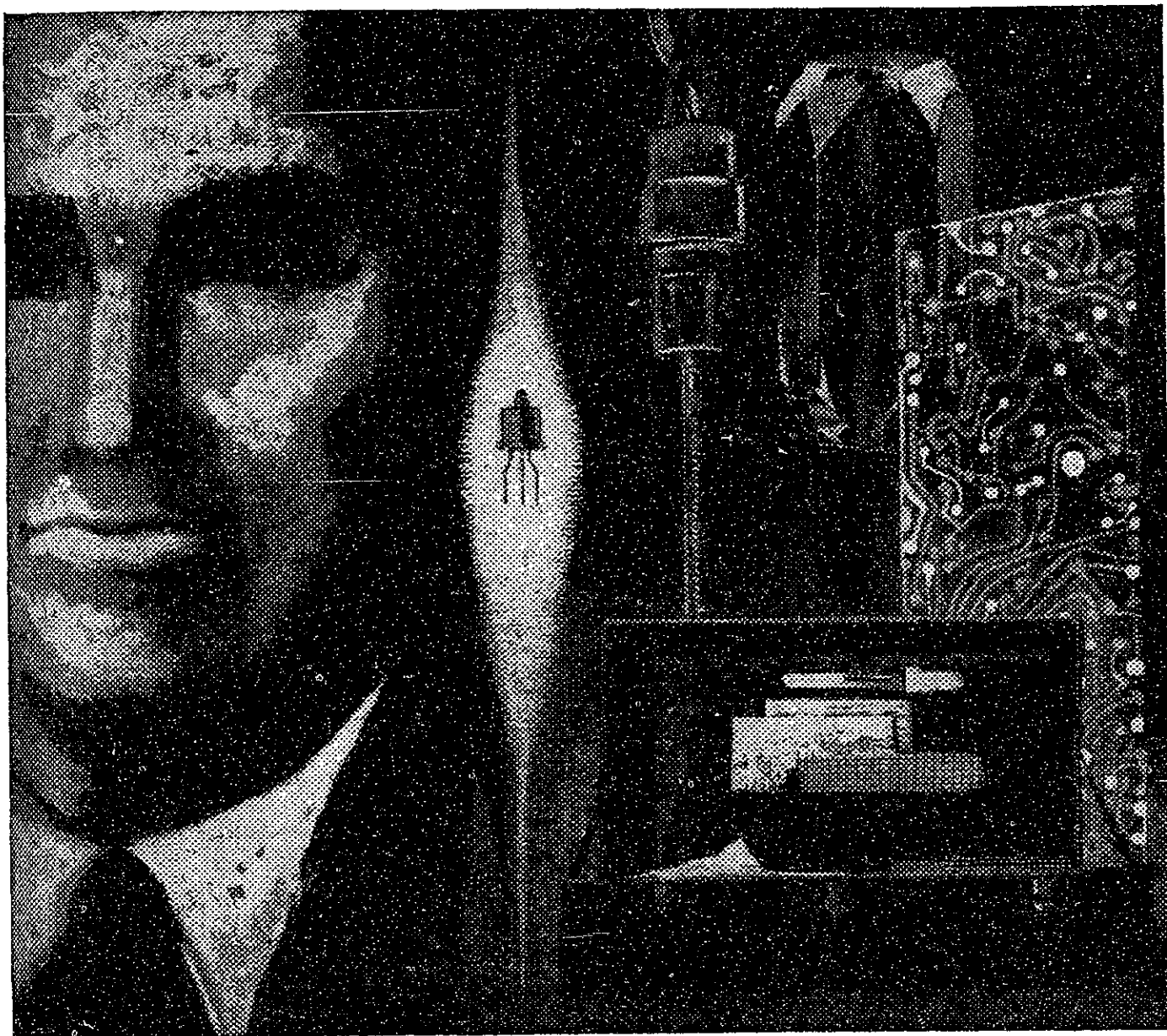
The Japan Society of Boston.*
Films: The first of a series of four modern Japanese films with English subtitles. "Arakure" (Untamed). Series tickets may be obtained at the door, students and members, \$2.75; all others, \$3.75.
Room 10-250, 7:00 & 9:15 p.m.

Protestant Christian Association.*
Study Group.
317 Memorial Drive, 5:00 p.m.

*Open to the public.

EXHIBITS*

Hayden Gallery.
Art Exhibit: A selection of paintings from the Corcoran Art Gallery. Displayed through October 29. Gallery Hours: Monday through Friday, 10:00 a.m.-5:00 p.m. Saturday and Sunday, 2:00-5:00 p.m.



Quality is the key to success at Western Electric

Admittedly, our standards are high at Western Electric. But engineering graduates who can meet them, and who decide to join us, will begin their careers at one of the best times in the history of the company. For plentiful opportunities await them in both engineering and management.

As we enter a new era of communications, Western Electric engineers are carrying forward assignments that affect the whole art of telephony from electronic devices to high-speed sound transmission. And, in the management category alone, several thousand supervisory jobs will be available to W.E. people within the next 10 years. Many of these new managers will come from the class of '62.

Now's the time for you to start thinking seriously about the general work area that interests you at Western Electric, the manufacturing and supply unit of the Bell Telephone System. Then when our representative comes to your campus, you'll be prepared to discuss career directions that will help make the interview profitable.

After a man joins Western Electric, he will

find many programs that will aid him in exploring the exciting course of his career - while advancing just as fast as his abilities allow. And he'll be secure in the knowledge that he is growing with a company dedicated to helping America set the pace in improving communications for a rapidly growing world.

Challenging opportunities exist now at Western Electric for electrical, mechanical, industrial, and chemical engineers, as well as physical science, liberal arts, and business majors. All qualified applicants will receive careful consideration for employment without regard to race, creed, color or national origin. For more information about Western Electric, write College Relations, Western Electric Company, Room 6106, 222 Broadway, New York 38, New York. And be sure to arrange for a Western Electric interview when our college representatives visit your campus.

Western Electric

MANUFACTURING AND SUPPLY  PART OF THE BELL SYSTEM

Placement Interviews

October 19

Jet Propulsion Laboratory, National Bureau of Standards.

October 20

Jet Propulsion Laboratory, Atlantic Refining Company, Corning Glass Works.

October 23

Boeing Company, Carling Brewing Company, General Motors, Rexall Chemical Company, Shell Chemical Company, Shell Oil Company, Sylvania Electric.

October 24

Boeing Company, General Motors, Shell Chemical Company, Shell Oil Company, Analytic Services, Inc., Institute of Paper Chemistry, Monsanto Chemical Company, Thermo Electron Engineering Corp., Central Intelligence Agency, Westinghouse Electric.

October 25

Boeing Company, General Motors, Monsanto Chemical Company, Central Intelligence Agency, American Cyanamid, Digital Equipment Corp., B. F. Goodrich Company, Sprague Electric Company, Sperry Rand Research Center.

LOWER RATES

SBI Good News! Savings Bank Life Insurance has REDUCED premium rates for straight life and endowment policies in amounts of \$3,000 and over. Ask for the folder showing these NEW LOWER RATES, today.

CAMBRIDGEPORT SAVINGS BANK
(Right in Central Sq.)
Cambridge, Mass.
Phone UN 4-5271

Principal manufacturing locations at Chicago, Ill.; Kearny, N. J.; Baltimore, Md.; Indianapolis, Ind.; Allentown and Laureldale, Pa.; Winston-Salem, N. C.; Buffalo, N. Y.; North Andover, Mass.; Omaha, Neb.; Kansas City, Mo.; Columbus, Ohio; Oklahoma City, Okla.; Engineering Research Center, Princeton, N. J. Teletype Corporation, Skokie, Ill., and Little Rock, Ark. Also Western Electric distribution centers in 33 cities and installation headquarters in 16 cities. General headquarters: 195 Broadway, New York 7, N. Y.

The Tech

Vol. LXXXI No. 19 Oct. 18, 1961

Chairman Charles Muntz '62
 Managing Editor Thomas Brydges '62
 Business Manager Peter Thurston '62
 Editor Carl I. Wunsch '62
 Sports Editor Thomas Sheahan '62
 Photography Editor Curtiss Wiler '63

News Editor Roger Weissinger '62
 Associate Managing Editor Joseph Hanlon '63
 Advertising Manager Robert Powell '62
 Circulation Manager Howard Kirkendall '63
 Treasurer John Dobson '62
 Controller Edward Schwartz '62
 Associate Photography Editor: Boyd Estus '63, Conrad Grundhener '64

Features Editor Toby Zide '63
 Entertainment Editor Warren Wiscombe '64

Managing Board Barry Blesser '64, Ann Sarney '64
 Candidates: Tom Maugh '66, Dick Minnick '65, Linda Rothn '64
 News Board Jeffrey Levinger '63
 Candidates: Robert F. Goldberg '65, Allen Haberman '65,
 Leon Harris '65, Andy Tannenbaum '66
 Photography Staff: Allen Rosenberg '63, John Eulenberg '64
 Candidates: Scott Grahm '65, Sanford Libman '65,
 Bob Spitz '65, Richard Long '65
 Photographic Laboratory Staff: Maxim G. Smith '64,
 Supervisor, Harold Iuzzolino '64, Bob Sanders '64,
 Lou Taft '64, Armand Poirier '63
 Candidates: Fred P. Anderson '65, Alan Schwartz '63,
 Arthur R. Sindoris '65
 Features Staff: Thomas F. Arnold '64, Don Goldstein '65,
 David Trevett '65

Unsigned editorials appearing in THE TECH constitute the opinion of the newspaper's Board of Directors, and not that of MIT. The newspaper welcomes letters from its readers. Space permitting, such letters will be printed in whole or in part, if deemed by the editor to be of sufficient interest or benefit to the community. Brevity increases the chance of publication. Anonymous letters will not be printed. Names will be withheld upon request.

Appointment

The Board of Directors of THE TECH takes pleasure in announcing the appointment of Roger H. Weissinger '62 as News Editor. Mr. Weissinger, of Course XIV-B, is a member of Phi Gamma Delta fraternity, and resides in Plattsburg, New York.

Peace Corps

There has been considerable misunderstanding and ignorance about the Peace Corps on this campus, and perhaps finally, some of it can be cleared up. Basically, most MIT students have been wondering where they fit into the picture of the Peace Corps call for volunteers: their draft status, their usefulness to the Corps, and the permanency of the program.

First, let it be said that the Corps is very much a going concern; there are already several hundred persons either overseas, or undergoing training, and there are several new projects under consideration in various countries. There is no lack of work to be done; it will simply take time, and money, to get everything started.

The touchy question of the draft can be answered very simply. There is no exemption, but there is deferment during time spent in the Peace Corps. One gathers from the Peace Corps representatives, that they expect that draft boards will not, simply as a matter of local policy, draft someone who has already been overseas for two years. There is, of course, no law requiring this, and how it will work out in practice will not be known until those Peace Corps volunteers now in the field have returned home. If local draft boards are co-operative, everything should work out equitably.

It would seem, that as of now, the people who are going to be most useful to the Corps are those with middle skills: the surveyor, the high school teacher, the construction engineer. At least in the beginning, the Peace Corps will be relying very heavily on practically trained people, those who can survey and build roads, who can teach English and History, or instruct in any of the practical arts. Eventually, people will be called upon to teach engineering, mathematics, and various other knowledge, less basic to getting an under-developed country on its feet.

Where does the MIT mechanical or chemical engineer fit into this picture? The answer is not yet totally clear because the Peace Corps is not sure what calls on its services are about to come. It is fairly certain that Ghana, for example, is not going to have any great need for a nuclear physicist, but she will have need for people who can teach engineering to her own citizens. She will also probably be building a certain amount of industry of her own which will call on most kinds of engineering skills that MIT people could provide.

There are two other aspects of the Peace Corps for MIT people to consider. One is patriotism. If this is the kind of work that needs to be done, perhaps it should be undertaken regardless of the fact that it might not call on the pure professional skills learned as a student.

The other aspect to consider is the experience that any volunteer would get overseas and in training. A remarkably large number of students never enter the field they study as undergraduates. The experience in the Peace Corps is essen-

tially a personal one, and certainly undertaking this for two years could not possibly harm an individual who is interested in working with people.

Classroom Smoking

The modern world can be divided conveniently into two groups of people: those who smoke, and those who do not. A generation ago, the former group would have gone out of its way to make sure it was not offending or disturbing the latter group. But smoking has become such an accepted social custom, that people now smoke without any thought for those who do not.

The specific circumstances we have in mind is in the MIT classroom. Many of these rooms are over-heated, ill-ventilated, and crowded; many people insist on smoking in these rooms, probably without realizing they very often cause those around them acute discomfort. To many a non-smoker, sitting through a class in a smoke-pervaded class room, can become something of an ordeal, and even a health hazard.

For this reason, and because most instructors will not ask a class not to smoke even though aware of the problem, we think a ban on classroom smoking should be instituted. There undoubtedly would be a clamor that this is a step in the direction of removing the Tech man's freedom. But, on the contrary, it would be a restoration to the non-smoker of his right not to have to breath foul air.

National Review I

Due to the generosity of a group known as the Young Americans for Freedom, *The Tech* has been favored with a gift subscription to the weekly magazine known as the *National Review*. We do not ordinarily look a gift horse in the mouth, but since this publication is one of the chief apostles of "resurgent conservatism," we thought our readers might like to know a little about it.

The first thing to note about the *National Review* is that it is prospering; from the small chip-on-the-shoulder, half-starved weekly of a few years ago, it has grown in size to the point where the October 7 issue has some thirty-two pages and an assortment of advertisers. Not only does it now rival its long-established liberal weekly counterparts in size, but even outdoes them by managing a glossy front and back cover. Once one is past the cover, though, there is the same rough paper. One must note that NR also outdoes the liberal weeklies in price; *The Nation* costs but twenty-five cents while NR collects forty cents the issue.

To understand the *National Review*, one must understand the chief postulates of its existence, and the not very deep philosophy of its editors. The editor of NR is Mr. William F. Buckley, Jr., late of the *American Mercury*, Yale University, and many speaking engagements. He is perhaps best known for a book published a few years ago entitled *God and Man at Yale*, which caused Yale officials no little pain. The major thesis of this volume is that the Yale faculty is overrun by atheistic socialists, if not communists, who are preaching their gospel to the sons of good free-enterprise, religious Yale alumni. Mr. Buckley called for these alumni to rise in righteous wrath to demand the expulsion of the forces of evil. Yale seems to have survived the onslaught, but Mr. Buckley has never given up trying. His more recent books have included *McCarthy and His Enemies*, and *Up From Liberalism*.

Buckley is the guiding hand on NR. What are the magazine's basic views? The premise which all its writers accept is that the United States population is divided into two very distinct groups, the Liberals and the Conservatives, both with capital letters. The Liberals have been entrenched in both local and national government, the premise goes, since the days of Franklin Roosevelt. Having allowed them to be in power for so long that they have virtually destroyed the country, it is time the Conservatives made a determined and sustained effort to regain control of the country's destinies.

The *National Review* makes use of a number of hard-core conservative writers, though the staff seems to have grown somewhat lately. Among the chief war-horses are people like Russell Kirk, Ralph de Toledano, Frank S. Meyer, and various others, who may be familiar to readers from other publications of a conservative tone. They all have styles that sound surprisingly alike; if one reads enough of them, it is possible, given a set of circumstances, to know exactly what one of their articles will sound like. There is a terrible hackneyedness to the Conservative clarion calls.

Letters:

To the Editor:

You must be congratulated for your anti-shelter editorial (*The Tech*, Oct. 4, 1961) in the face of a massive brainwashing which the American public is getting, to the effect that they can live cozy, patriotic and supremely safe lives if they will just get busy and build their little tombs.

A further point is worth mentioning: that even the shelters which are relatively safe could be expected to become obsolete at about the same schedule that cars now enjoy. For bombs can be made larger and larger, thus driving the cave dweller deeper and deeper into the earth. As Harrison Brown has pointed out, once we become psychologically attuned to this pattern, we become entrapped in a hopeless cycle of bigger bombs and deeper holes.

Kenneth C. Knowlton

To the Editor:

I must disagree with some of the comments made in the Oct. 4 issue of *The Tech* with regard to bomb shelters at MIT. First, the fact that bomb shelters are being built in this country does not mean that we are turning into a militarist society, but rather means that we are finally beginning to face reality. We can no longer ignore the fact that certain individuals have it within their power to unleash the horrors of nuclear war upon the world either by accident, miscalculation or a deliberate attack.

The dangers of war seem even greater when we realize that the nations possessing the greatest stockpiles of these weapons are two whose ideologies are almost exact opposites and are in perpetual conflict. One cannot help but wonder how much longer things will go on without the conflict turning into an all-out combat. So, with the situation as it is, just what is so terrible about trying to have at least some means of protection, however slight, against the hatchet hanging over our heads?

Normal people take out insurance, but they don't walk around expecting to get sick or to have an accident. Therefore, the building of shelters is not

necessarily a negative attitude. We can still face the world and try to find a positive answer, as sane men must. However, just in case reason fails, there would be this form of insurance. As for the argument that life in the world after nuclear war would not be worth preserving, I consider this to be a much more negative attitude than the building of bomb shelters. I can only suggest that we build the shelters and, if the day of reckoning ever comes, let the ones who want to stay outside and die do so, and also let the ones who want to go inside and increase chances of survival do so. Bill Love '64

To the Editor:

Last week you said: "If the use of shelters should ever become necessary, then we have lost everything we are working for."

We may therefore assume that "everything you are working for" is the prevention of the necessity of shelters. This philosophy justifies any concession when a hot war is posed as the only other alternative.

If Khrushchev threatened nuclear war you would have us surrender Berlin, Formosa, Indo-China, and anything else he demanded. Your policy leaves no provision for drawing the line anywhere short of complete and total surrender.

Your beliefs have been summarized by many others. "Better be Red than dead," "I would rather crawl on my knees to Moscow than die under an atomic bomb." And so on.

Has America become so degenerate that we are now afraid to defend ourselves or our principles?

Perhaps you say "We propose risking our lives (by not building shelters) to defend our principles (non-militarism)." This is an admirable stand. However, you cannot support your contention that nationwide shelters imply a militaristic society.

When this keystone of your argument is shattered, there remains nothing to support your proposal of national vulnerability.

You and your readers are referred to an editorial in the Oct. 13 issue of *Life*.

James A. Moore Jr. '64

Kibitzer

By Elwyn R. Berlekamp '62

Lack of communications between his own hand and the dummy prevented South from making today's contract, taken from last Saturday's tournament at the MIT Bridge Club. It was an off week and the field was not very large, but readers are reminded that coming up next Saturday, Oct. 21, will be the MIT team of four championships. This will be a two session event starting at 1:30 in the afternoon, breaking up for supper, and reconvening in the evening.

The bidding on the hand shown above varied from table to table, but most North-South pairs arrived at 3NT in spite of East's vulnerable overcall. East would have been set to the tune of about 800 points had he been forced to play the hand at 1♠ doubled, but fortunately West realized that his hand was not likely to take a single trick as a ♠ Dummy and so he wisely rescued East to 2♥, a contract which can be set only one trick. North-South decided that they stood to gain more by trying for their 3NT contract than by toying around doubling the 2♥ bid.

West correctly decided to lead the singleton in his partner's suit rather than his own long hearts. Looking only at the North-South cards, one might think that a heart lead would be better for the defense; however, such is not the case. South simply holds up his King until

NORTH			
♠	10 6		
♥	Q		
♦	A K 9 5 3 2		
♣	A Q 10 9		
WEST		EAST	
♠	8	♠	A Q J 5 2
♥	J 9 5 4 3 2	♥	A 10 8
♦	8 7 6	♦	J 10 4
♣	K 7 5	♣	J 6
SOUTH			
♠	K 9 7 4 3		
♥	K 7 6		
♦	Q		
♣	8 4 3 2		
East-West vulnerable. Bidding:			
North	East	South	West
1♠	1♠	Dbl.	2♥
3♣	P	3NT	All in
Opening lead: ♠8.			

the third round and West without an entry. West anticipated this problem from the beginning and thereby avoided the heart opening lead, against which declarer would have had no problems.

East played the ♠J on the first trick and South took the King. Overanxious to run Dummy's long diamond suit, declarer laid down the Queen at once. Such shortsightedness was excusable and cost him the contract. He should have foreseen that there was no way to get the lead back to his hand again unless he saved this card. With two club honors missing, a better strategy would have been to finesse the clubs at once. (Please turn to page 5)

Kibitzer

(Continued from Page 4)

saving the ♦Q for an entry to take a second finesse if the first one failed. But, as mentioned above, South was in a hurry to run Dummy's long suit and just couldn't wait to get that ♦Q out of the way. After he cashed it he switched to the clubs. When West played low, he went into a trance for a while and decided to try Dummy's 10. On the basis of what he had seen and heard, this play was quite

conceal, as East had made the vulnerable overcall and was therefore more likely to hold the ♠K than the ♠J. However, cards were not with the odds and the ♣10 lost to the Jack. East concluded from this cheap trick that his partner must have the King. He therefore laid down the ♠A and ♠Q and the ♥A, giving the defense their book. He then confidently shifted to the ♦J, seeing that the lead could never escape from Dummy until North led the ♣Q to West's King for the setting trick.

It will be noted that any other defense by West will enable South to make the hand. Should East fail to cash out completely, South will be able to force one opponent or the other to lead a card which he can win in his own hand, thereby solving the problem of communications. As played, however, South was fixed as soon as he laid down the ♦Q. Maybe next time he'll restrain his gluttony for Dummy's long suit and instead conserve his entries.

Interested In The Market?

For a copy of our fall "Security & Industry Survey," or other investment information,

Contact MR. JAMES E. FOX

Merrill Lynch, Pierce, Fenner & Smith, Inc.

480 Boylston Street, Boston, Massachusetts KE 6-7100

Leavitt and Peirce, Harvard Square tobaccoists since 1883, happily announces . . .

SECOND ANNUAL CONTEST

for the best

Leavitt & Peirce Advertisement

written by a Harvard or M.I.T. undergraduate or member of any of its Graduate schools . . . Cliffies welcome, too

\$700 IN CASH PRIZES

FIRST PRIZE	\$300
SECOND PRIZE	\$150
THIRD PRIZE	\$100
FOURTH PRIZE	\$75
FIFTH PRIZE	\$50
SIXTH PRIZE	\$25

CONTEST RULES

Subject matter—Leavitt and Peirce. Hard sell, soft sell or institutional. Prose, poetry, art—singly or in combination. Awards will be based on appropriateness and originality. Advertisements can be any size and may be submitted in rough draft or finished layout form.

Contest dates Monday, October 16 through Saturday, December 9. All entries must be delivered to Leavitt and Peirce by 6:00 P.M., December 9, or postmarked not later than midnight of that date.

Enter as many advertisements as you wish, but only one prize to a contestant. Each entry should be the original work of the contestant submitting it.

All entries become the property of Leavitt and Peirce. Winning advertisements, if suitable, will appear in local and national Media.

The Judges:

FRANCIS W. HATCH '19, Batten, Barton, Durstine & Osborn

NEIL H. BORDEN, MBA '22, Harvard Business School

STACY HOLMES '31, William Filene's Sons Co.

LEAVITT and PEIRCE

1316 MASS. AVE., Harvard Sq., Cambridge

College World

Tech Listed Fourth Most Expensive Behind Penn, Harvard and Princeton

By Toby Zicko '63

The California state legislature recently repealed a state law that had been in effect for almost a year. This law was Section 172, Part A, of the California Penal Code. The repeal of this law was so important to students in California that it was reported on the front page of the *San Francisco Foghorn*. What was the law? Very simple. The law restricted the sale of intoxicating beverages within a mile and a half radius of any college having an enrollment of more than 1,000 students, at least 500 of whom were living on the school campus. Because San Francisco has three qualifying schools, the sale of liquor was restricted in about twenty square miles of the city. This, however, would be small when compared with a similar area of Greater Boston if Massachusetts had such a law.

New Survey Released

Students at Washington University in St. Louis seem to be facing a financial crisis. The university is increasing its prices. Among its arguments is the traditional comparison with the amounts charged by other schools. Appearing in the *WU Student Life* is a survey compiled by the Life Insurance Agency Management Association, comparing costs of tuition, room, board, and fees at twenty-seven colleges throughout the country. These run from Brandeis to Stanford and from Denver to Miami, and naturally include MIT.

MIT is ranked as the fourth most expensive school in the survey, following Pennsylvania (\$2600), Harvard (\$2570), and

Princeton (\$2560). MIT's cost is only \$4 less than Princeton's, — \$2556. The costs are supposed to be for 1961-62. You can see that another \$44 would tie us for the lead. By next year we shouldn't have to settle for fourth place. By the way, in case you're wondering, fifth place is held by Yale with \$2550, and Washington's cost is \$2000.

More Coeds

From various other college papers we have come up with miscellaneous assorted facts you might be interested in. The *New Hampshire (UNH)* reports that motor scooters are forbidden to travel on New Hampshire turnpikes after sunset and that the latest dance craze on the UNH campus is "The Twist". The *Rensselaer Polytechnic* discloses that for the first time in its school's history there is such a thing as an RPI coed. In fact, there are eight.

From the *Minnesota Daily* come two items. University of Minnesota's Phi Delta Theta and Phi Epsilon Pi fraternities are claiming a new record. They have piled 101 people onto a

single mattress. The shattered record was 91 people, set by Fresno State College two years ago. Also, the University's first building was heated by 43 wood stoves and had no means of ventilation.

ACEJ Takes Action at BU

The *WU Student Life* announces that Washington University has a new Vice-Chancellor and Dean of Faculties. He is Thomas H. Eliot, a native of Massachusetts and a former Course XIV lecturer at MIT. According to the *Boston University News*, the American Council for Education in Journalism has withdrawn accreditation for BU's news-editorial course. The courses had been accredited since 1951. Unless an appeal is granted, the next ACEJ evaluation will not come until 1966.

Boston's Museum of Science says that Irish moss, the purple seaweed that turns white when bleached, makes a very delicious pudding called seamoss farine.

Unusual Projects Highlight Spare-time Hobby Shop

By Don Goldstein '65.

Want to build your own bed? Or rebuild an engine? Or make a bicycle built for two? Or construct (practically) anything under the sun? Then head for Tech's Hobby Shop in room 2-051.

The Hobby Shop is available for the use of any student or staff member of M.I.T. at a fee of \$3 per term or \$5 per year. It includes a wide range of tools and equipment for work in wood, metal, electronics, printing, and photography. According to Bob McCadden, who supervises the Hobby Shop, it contains the only woodworking shop and printshop on campus, and the best equipped darkroom as well.

Sky's The Limit

The most common projects at the Hobby Shop are bookcases, lamps, and musical instruments such as guitars and bongo drums. Occasionally, however, an unusual project is undertaken. As Mr. McCadden put it, "The sky's the limit."

One student last summer actually did build a bicycle for two, while another ambitious Techman several years ago made a floating dock. Auto engines are frequently rebuilt at the Hobby Shop, but a student is now working on a small airplane engine.

Recently a boating enthus-

last made several thistles and kyaks there, and another one used the Shop's facilities to make his own 30-foot motorboat.

The most unusual project in recent years, Mr. McCadden recalled, was by a businesslike Tech student who made a mold for plastic "leather" wineskins. These wineskins, modern replicas of an age-old device for holding one's liquor, were then sold on the market.

Photo Contest Planned

The Hobby Shop was started in 1937 and has expanded enormously since then. It is hoped that the next major piece of equipment to be added will be a small offset press for the printshop. Also, now in the planning stage is a school-wide

(Please turn to page 12)

Your Future in Electronics at Hughes

As the West's leader in advanced electronics, Hughes is engaged in some of the most dramatic and critical projects ever envisioned. Challenges for your imagination and development are to be found in such diversified programs as:

Project Surveyor (soft lunar landing)
3-dimensional Radars
Plasma Physics, Ion Propulsion
Solid State Materials and Devices

Communications Satellites
Digital Computer Systems
Hydrospace Electronics
Infrared

These are among the more than 500 outstanding programs now in progress at Hughes. These programs require the talents of E.E.'s and Physicists who desire to work with professional scientists in research, development and manufacture.

In addition, Hughes sponsors advanced degree programs for academic growth. These programs provide for advanced degree study at many leading universities.

ELECTRICAL ENGINEERS and PHYSICISTS
 B.S., M.S. and Ph.D. Candidates
 Members of our staff will conduct

CAMPUS INTERVIEWS
November 7-8, 1961

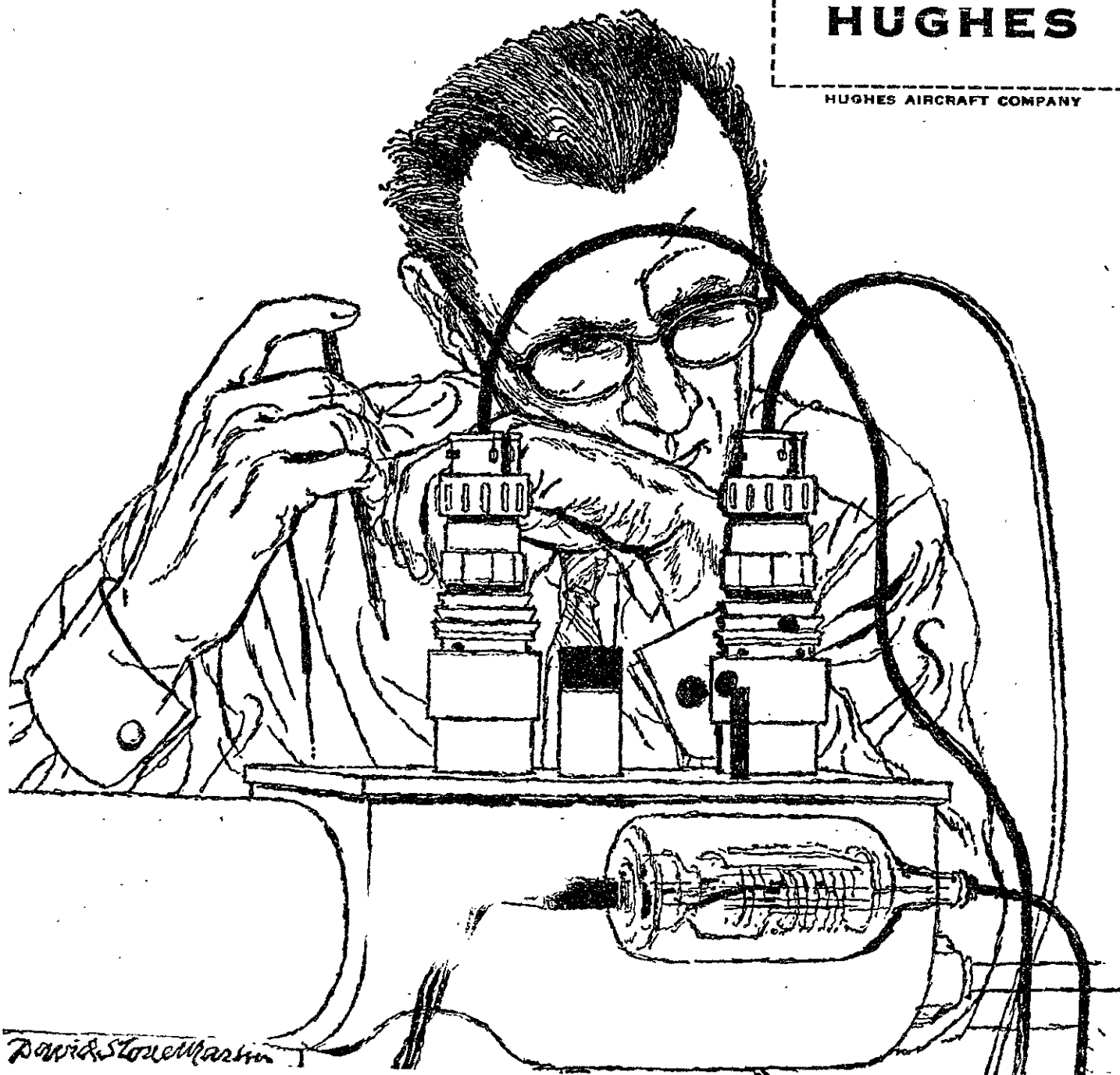
Find out more about the wide range of activities, educational programs, relocation allowances and progressive benefit plans offered by Hughes. For interview appointment or informational literature consult your College Placement Director. Or write: College Placement Office, Hughes, Culver City, California.

An equal opportunity employer.

Creating a new world with Electronics

HUGHES

HUGHES AIRCRAFT COMPANY



Harvard Cooperative Society Nominations

The Stockholders at the annual meeting on Friday, October 6th, 1961, made the following nominations for Stockholders, Officers and Directors:

STOCKHOLDERS:

To hold office for five years.
 Francis Keppel
 Edward S. Mason

OFFICERS:

To hold office for one year.
 President
 Stanley F. Teele
 Vice President and General Counsel
 Austin W. Scott
 Vice President
 Malcolm G. Kispert
 Secretary
 Walter Humphreys
 Treasurer
 Russell H. Hassler

OTHER DIRECTORS:

From the Officers or Alumni of Harvard.
 John H. Finley, Jr.
 Delmar Leighton
 Louis Loss
 Robert S. Mullen
 Elliott Perkins
 Lewis G. Wiggins
 From the Officers or Alumni of M.I.T.
 Houlder Hudgins
 Donald P. Severance
 From Harvard
 Class of 1962
 Mark H. Mullin
 Class of 1963
 Charles M. Warchol
 Class of 1964
 Douglas M. Lange
 From M.I.T.
 Class of 1962
 George M. Wyman
 Class of 1963
 Edgar A. Womack, Jr.

Kohn Magnet Produces Largest Continuous Field: 126,000 Gauss

A magnetic field of 126,000 gauss has been produced in MIT's National Magnet Laboratory.

This is believed to be the largest continuous field ever generated.

The magnet is about the size of a grapefruit. In its center is a tube measuring one inch in diameter and two inches in length. Surrounding this is a copper ribbon 135 feet long. It tapers from a width of six inches to a width of 1/2 inch. The magnetic field is produced when a current of 10,000 amperes flows through the copper.

Dr. Henry H. Kolm, a member of the Laboratory staff, invented and patented the magnet. Five years ago, he and Dr. Simon Foner, also a staff member, built a magnet which produced pulsed fields of 750,000 gauss. These lasted only a few millionths of a second. This field was one and one-half million times as powerful as the earth's magnetic field.

The magnet's power supply is 1,880,000 watts; eventually it will be increased to 8,000,000 watts. In order to absorb the enormous amount of heat produced, 320 gallons of water are pumped through the copper coil per minute. The high magnetic fields produced will be used to do research in many scientific areas, including fusion power, super-conductivity, and solid state physics.

Professor Francis Bitter and D. Bruce Montgomery, also of the Laboratory staff, are working on a magnet which will be capable of producing continuous magnetic fields of 250,000 gauss.

The Kolm magnet was built by High Voltage Engineering Corp. of Burlington, Mass., under contract to Lincoln Laboratory.

Tech Loses Near-By Stores, Services



— Photo by Conrad Grundlehner '54
A fireman sprays the dying fire Saturday mid-morning. The fire continued burning until about 1 p.m. Saturday.

(Continued from Page 1)

Although it would have inconvenienced WTBS, the student Managing Board had okayed the plan.

WGBH, Massachusetts' only educational television station, is on the air on schedule despite the fire. The station, Channel 2, is temporarily using studios at the Television Center of the Catholic Archdiocese of Boston on Granby St., Back Bay.

Contributions of time, money

and facilities have enabled WGBH to deliver lessons in science and languages on time to its 300,000 students. Besides the Television Center studios, facilities in the basement of MIT's Kresge Auditorium and office space in the Kendall Building in Kendall Sq., Cambridge, will be used to coordinate the station's programming.

All live shows will originate at Granby St. until further notice, taped and filmed shows from four different locations



— Photos by Curtiss Wiler '63
A fireman seeks a spot to place some of WGBH's equipment carried out of the gutted building (top photo). Below, the front of the building late Saturday morning as the fire department made certain that the blaze had been fully extinguished.

due to the scarcity of video tape machines in the Boston area. These taped programs go by telephone line to be beamed by microwave to Channel 2's transmitter atop Great Blue Hill in the Milton-Canton area. The evening taped shows will be picked up from the facilities of WENH, Channel 11, the University of New Hampshire station, and rebroadcast.

Two new video tape machines will be ordered from Ampex Corp. in California and installed as soon as clearance is received from the insurance company. The machines cost \$40,000 each and will require an addition into the courtyard of the Granby St. building to house them.

Even before the rebuilding fund was set up, help came from business, private persons and friendly television stations. A Natick brewing company offered the services of its public relations staff to aid in the drive, and offered in addition to buy some equipment for the station. Donald Upham of Station KLAM in Cordova, Alaska, and Elizabeth Campbell, president of WETA-TV in Washington, D. C., offered aid.

Those who would like to offer assistance, financial or otherwise, can contact WGBH through their original telephone number, UN 4-6400, or their new mailing address, WGBH, Cambridge 42, Massachusetts.

MIKE MENNEN and the "BANK VAULT CAPER"

OFFICE JAMMED WITH CLIENTS ALL DAY. SOLVED SEVERAL INTERESTING CASES. COLLECTED \$9.31 IN FEES. TOO MUCH TO KEEP ON HAND. STARTED TO BANK. STOPPED OFF FOR BOTTLE OF MENNEN SPRAY DEODORANT.

TELLER 3 TELLER 2 TELLER 1

BANK PEOPLE REAL FRIENDLY. ONE OFFERED 5 YEARS' INTEREST IN ADVANCE. ANOTHER OFFERED 10. FINALLY SETTLED FOR BEST FIGURE ... 38.

WENT WITH TELLER TO PUT MY CASH AWAY. DOOR JAMMED. HEAT INSIDE TERRIFIC. FORTUNATELY, MENNEN SPRAY DEODORANT IS HARD-WORKING AND LONG-LASTING. I STAYED CALM AND COOL. TELLER DIDN'T.

SHE STARTED SORTING OUT THE \$1,000 BILLS. SAID SHE LOVED TO COLLECT PICTURES OF GROVER CLEVELAND. SOUNDED LIKE A PHONY NAME TO ME ... SO I SLUGGED HER.

TELLER TURNED OUT TO BE "BELLE GRAND" LADY BANK ROBBER. GOT REWARD FOR CAPTURE. SPENT IT ON ANOTHER BOTTLE OF MENNEN SPRAY. WENT BACK TO OFFICE. IT WAS FULL OF CLIENTS. SNEAKED HOME TO REST.

GOOD NEWS! NOW YOU CAN STAY AT THE PALACE-ON-PARK-AVENUE!



New York's most exciting hotel welcomes you! We are hosts to Presidents, Kings and Queens... to diplomats, ambassadors and travelers from every corner of the earth... and now we look forward to playing host to you!

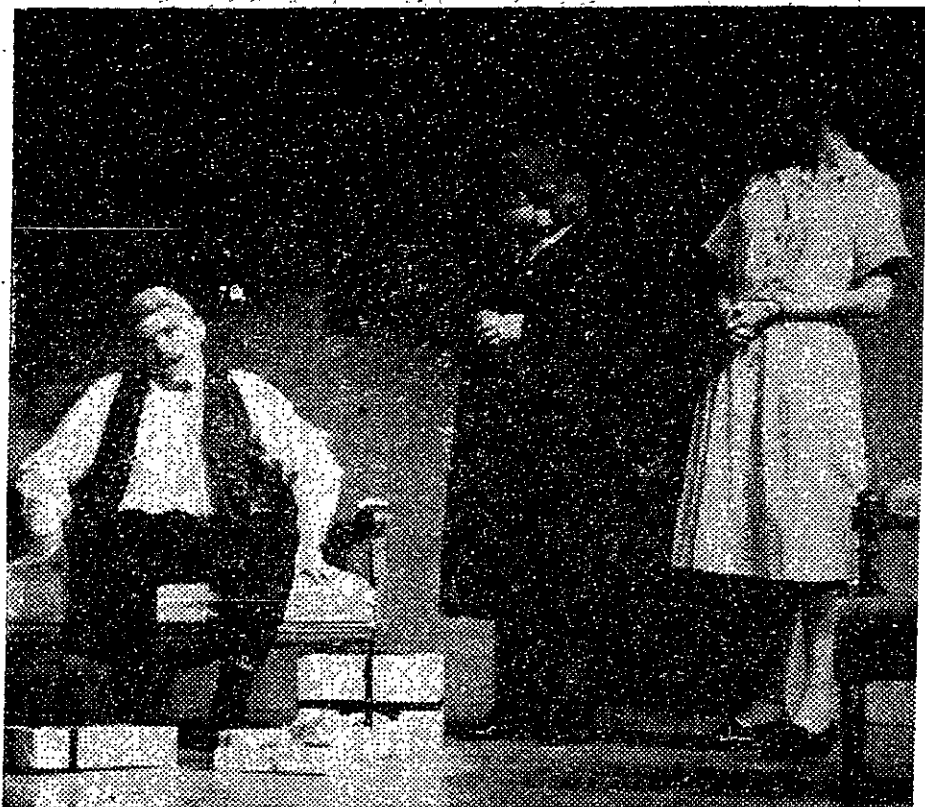
STUDENT RATES
 \$8.00 per person, 1 in a room
 \$6.00 per person, 2 in a room
 \$5.00 per person, 3 in a room

Reserve your room through any Hilton Reservation Service or write direct to Miss Anne Hillman, Director of Student Relations, The Waldorf-Astoria.

THE WALDORF-ASTORIA
 49th & 50th Sts. on Park Avenue, New York, N.Y.
 Conrad N. Hilton, President

One-Acts Produced In 9 Days

Drama Shop Scores Success



Hen-pecked husband tries to assert his masculinity in Albee's "The American Dream." The mamma, pappa, and grandma shown here are identical with those in "The Sandbox" except for the actors. This sublimely ridiculous satire featured a masterful performance by Joanie Sommers as Grandma.



— Photos by Conrad Grundlehner '64
Mamma and Pappa wait for Grandma to die in grotesquely humorous scene on the beach in Edward Albee's "The Sandbox." A young sun-tanned he-man who is a background figure in the story later turns out to be the angel of death who takes Grandma while she is playing in the sandbox.

A tentacle into the field of ultra-modern drama created mixed emotions, laughter, and some deep thinking in the MIT Drama Shop series of one-act plays in Kresge last Friday night. The two plays, written within the past two years, were the product of the intensely satirical Edward Albee. Both plays had essentially the same characters, but in different situations. As a matter of fact, one was written in the midst of the other.

In the critique after the plays, it was found that no less a personage than Albee's roommate was in the audience, for he spoke up in defense of Albee's originality after a plagiarism charge. The ensuing arguments established that Albee's plays cannot stand alone without a knowledge of the personal life of the man himself, from which their material is drawn.

The evening as a whole was very stimulating, and it is highly recommended to all Tech students, alone or with dates (there is about an even balance).

Tryouts for the next Drama Shop evening of contemporary one-act plays will be held on Monday, Oct. 23, in the Little Theater at 7 p.m. The plays will be performed the evening of Nov. 3. New members are welcome at all try-outs. Positions in acting, scenery designing, and stage crewing are available.

The major fall production of the Drama Shop will have try-outs the evenings of Nov. 6, 7, and 8 in the Little Theater at 7:30. It will be performed Wednesday through Saturday nights, Dec. 13-16.

Subscribe to *The Tech*

Samuel Bluestein Co.

School-Engineering Supplies
Ask About Student Discount
1080 Boylston St., Boston
CO 7-1102
345 Main St., Malden
DA 2-2315

'Cherchez la Femme' Reveals Tale Of Week's Multitudinous Mixers

Considering that this is one of the last appearances of this column, it's just loaded with information this week. So Tech men, take heed: these are some of your last opportunities.

Franklin Square House

As previously mentioned, Franklin Square House, a large girls' boarding house, will be holding a dance TONIGHT from 8-12 P.M. The address is 11 East Newton Street and admission is free, with a ticket.

Bouve Boston School

Here's one of the many mixers for Friday night: Bouve Boston School is holding a mixer in Ruth Page Sweet Hall (known by many as Sweet Hall) from 8-12 P.M. The dance will be open to all and admission will be \$50.

Boston University

Brook Hall is holding a mixer on the 20th which is open to all, and, believe it or not, free. It'll be, of course, 8-12 P.M. At the same time there'll be a mixer for grads only at Shelton Hall, but this one will be by invitation only.

Cambridge City Hospital

Still another mixer on Friday night will be held at the nurses' home, 16 Camelia Avenue, at 8 P.M. Admission will be \$99.

Chandler School for Women

Here's still another for Fri-

day: Chandler is having a mixer at the Hotel Somerset at 8 P.M. There will be no admission charge.

Emmanuel College

Emmanuel is having a "Country Caper" in true mixer style Friday night at Marian Hall, 8-12 P.M. There will be a \$99 admission charge.

Radcliffe

Radcliffe's biggest dormitory, Comstock, is holding a dance on Thursday, October 19, at 8 P.M. Admission is by invitation only.

BIG SAVINGS

SBI can be yours! Premiums have been REDUCED on many Savings Bank Life Insurance "economy-size" policies issued in amounts of \$3,000 or more. Ask for free folder showing how you can get more protection at lower cost. Do it today.

CAMBRIDGEPORT SAVINGS BANK
(Right in Central Sq.)
Cambridge, Mass.
Phone UN 4-5271

G. L. FROST Co., Inc.

AUTOMOBILE BODY REPAIRING & REFINISHING

E. W. PERKINS
Tel. ELiot 4-9100

31 LANSDOWNE STREET
CAMBRIDGE, MASS.

"Sophia Loren is magnificent! This one role is sufficient to place her among the top actresses of our day." —Herald

Joseph E. Levine presents

SOPHIA LOREN in
"TWO WOMEN"

Produced by Carlo Ponti
Directed by Vittorio DeSica
An Embassy Pictures Release

KENMORE

Near Kenmore Sq. KE 6-0777

The Community Church of Boston

Conservatory Auditorium
31 Hemenway Street

Dr. Harold Ehrensperger

Chairman, Div. Theatre Arts, B.U.
Prof. Religion and Creative Arts,
B.U. School of Theology; Author of
"Conscience on Stage"

"Drama and The Anxiety of Our Time"

Sunday at 10:30 a.m.

Oct. 29 — Dr. Frederick C. Schuman
Nov. 5 — Dr. Scott Nearing
Nov. 12 — Jim Peck

Limelight Productions present

Saturday, October 28th

DICK GREGORY

At Donnelly Memorial Auditorium

TICKETS NOW ON SALE at the Hub Ticket Agency, 110 Stewart St. (corner Tremont) Boston 16, Box Office Prices \$3.75, \$3.25, \$2.75, \$2.25. MAIL ORDER: Make checks payable to Hub Ticket Agency, 110 Stewart St., Boston 16. Please enclose self-addressed stamped envelope.

Welcome Aboard
to

**The Annual
SAE**

Sailor Dance

"Shipwrecked on Paradise Isle"

Saturday, October 21, 8:00 P.M.

Informal

"Your Ticket is a date"

Sigma Alpha Epsilon, 484 Beacon St.

SPACE, MISSILE & JET PROJECTS AT DOUGLAS

have created outstanding
career opportunities for

SCIENTISTS and ENGINEERS

with or working on advanced degrees

Assignments include the following areas:

Heat Transfer—relating to missile and space vehicle structures

Servo-Mechanisms—relating to all types of control problems

Electronic Systems—relating to all types of guidance, detection, control and communications

Propulsion—relating to fluid-mechanics, thermodynamics, dynamics, internal aerodynamics

Environmental—relating to air conditioning, pressurization and oxygen systems

Structures—relating to cyclic loads, temperature effects, and the investigation of new materials, methods, products, etc.

Aerodynamics—relating to wind tunnel, research, stability and control

Solid State Physics—relating to metal surfaces and fatigue

Space vehicle and weapon system studies—of all types, involving a vast range of scientific and engineering skills

Get full information at

PERSONAL ON CAMPUS INTERVIEWS

Monday & Tuesday, October 30 & 31

We urge you to make an appointment to meet our representative through your placement office. If you cannot do so, please write to

Si Amestoy

Staff Assistant to VP Engineering

DOUGLAS AIRCRAFT COMPANY, INC.

3000 Ocean Park Blvd., Santa Monica, California

An equal opportunity employer

Open Bid Parties Beckon As Social Season Begins

The fall social season kicked off with the annual Phi Beta Epsilon open bid party last Saturday at the Cambridge Yacht Club. It will be followed by the SAE Sailor Dance next Saturday, Oct. 21, at the SAE house at 484 Beacon. The season will close with the Sigma Phi Epsilon Circus Nov. 18 at the Sig Ep house, 518 Beacon.

The semi-formal Phi Beta Epsilon party began for arriving couples with a warm welcome from Roberto Pececi, who trimmed his beard for the occasion. The girls were then separated from their dates and schooled upstairs while the men

got a head-start on the evening's second most popular pastime, which was enjoying the Phi Beta half-and-half punch—half pineapple juice and half molasses juice.

Dancing was, of course, the primary activity, with a segment of Marshard's orchestra providing some excellent music. Cha-chas and mambos were most prevalent on the dance floor; there were also a few twisters.

The Phi Betes are to be complimented on their party. We hope to see it again next year.

The annual SAE Sailor Dance this Saturday with its notorious seabreeze punch calls for extremely informal attire. The entire house will be decorated as a

river steamer, complete with wheelhouse topside and dance floor below decks. This open bid party is usually the biggest on campus; last year over 550 people walked in, and much later over three quarters of this number walked out again.

The 'clowns' at the Sig Ep house will entertain MIT men with their massive Circus on Nov. 18, a biannual event alternating with the DU Carnival.

We are very glad to see the fraternities bring back the big open bid parties, and we appreciate the efforts of those who have kept the tradition from dying out. At the same time we would like to see the trend of disappearing open bid parties reversed. The least we can do is equal previous years in the number of such parties, which is certainly not now the case.

Subscribe to *The Tech*

Don't miss the great
Charlie Chaplin

In
"The Gold Rush"

with words and music

Plus!

**"When Comedy
Was King"**

FRIDAY, OCT. 20

Marcel Camus'

"Black Orpheus"

and

**"Jazz On A
Summer's Day"**

fine arts

Norway at Mass. Ave.

CI 7-8140

STORYVILLE
at BRADFORD HOTEL

• TONIGHT THRU SUNDAY
Also Sunday Matinee 3-6:30

**CHRIS
CONNOR**

• Opening Monday

**HORACE
SILVER**

and His Quintet

No Cover Charge Anytime



Sunday Evening OCTOBER 22 at 8 o'clock

ELLIOT L. RICHARDSON
ARNOLD M. SOLOWAY
CHARLES L. WHIPPLE

"Corruption in Massachusetts"

FORD HALL FORUM

JORDAN HALL — Gainsboro St. cor. Huntington Ave. — BOSTON
DOORS OPEN 7:45 P.M. EVERYBODY WELCOME

Museum of Fine Arts Has Peruvian Display

Have you always had an unquenchable desire to see some true Indian art? If so, here is your chance! The Boston Museum of Fine Arts is sponsoring its first major exhibition of the current season, five rooms full of Peruvian art. Between now and November 5th, art fanatics will have an opportunity to see almost three hundred pieces created by Indian artisans between 700 B.C. and 1800 A.D. They have been gathered together from various sources in the Greater Boston area, mostly from the collections of the Museum itself and the Peabody Museum at that most primitive of institutions, Harvard, but it is the first

wrap up the dead, up to five feet high and remarkably well preserved and brilliant despite their age of almost two thousand years.

Before the advent of the second great pan-Peruvian age, there developed one more local style of importance, the Nazca. This is noted for its color and also for the stylized forms it used. The bodies created during this period were more or less ellipsoids having very tiny limbs. There were exceptions to this rule, however, and one of the most noticeable was a giant head which was important enough to be given its own pedestal.

An Art Of Antiquity
The earliest of the great pan-Peruvian styles is the Chavin. It dates from about 700-300 BC and is mostly represented by such articles as crowns, rings, spoons, headbands, and breastplates. One of the main distinguishing characteristics of this earliest art is the prominence of protrusions on the figures. The other styles seem to prefer a smoother design.

Following this came two more local styles, the Mochica and the Paracas. The former concentrated on pottery, mostly in the form of effigy jars. These are covered with figures of gods, warriors, animals, flowers and some of them must have been designed for the sole purpose of producing nightmares. But there was some attention given to form and two of the best busts in the entire collection were made by this people.

Colorful Death Shrouds
With the Paracas phase we see the development of the formalization and symbolism which was to characterize future Peruvian art. Here are some of the show's most striking exhibits, textiles used to

wrap up the dead, up to five feet high and remarkably well preserved and brilliant despite their age of almost two thousand years.

Before the advent of the second great pan-Peruvian age, there developed one more local style of importance, the Nazca. This is noted for its color and also for the stylized forms it used. The bodies created during this period were more or less ellipsoids having very tiny limbs. There were exceptions to this rule, however, and one of the most noticeable was a giant head which was important enough to be given its own pedestal.

Tiahuanaco—The Pinnacle
At last the art of Peru was unified once more with the advent of the Tiahuanaco style in 1000 A.D. The works now are the most colorful to come out of the country. Symbolism and abstraction is perfected. Yet the art retained a spontaneity and managed to resist formalization for three hundred years.

Finally came the Inca style. It was now that the formalization of pattern, which had been so well resisted earlier, finally set in. These people were fine craftsmen, but they had little originality. The only exception is found in a wild turkey incense burner which I found the most beautiful piece in the exhibit.

This is not a show for the average person. It is not even a show for the average art lover. To my mind there are only three groups of people who would find it interesting, lovers of primitive art, people interested in Indians and pre-Spanish culture in Latin America, and those who are interested in the work of artisans as distinct from artists. Go elsewhere, young man, or you will be disappointed.

Richard N. Waterhouse '65

Brattle Theatre

Harvard Square

General Della Rovere

thru Oct. 21

5:30 7:30 9:30

**"A NIGHTMARISH
MASTERPIECE"**

Michelangelo Antonioni's

"L'AVVENTURA"

with Monica Vitti - Gabriele Ferzetti - Lea Massari
A Janus Films Release

SHOWN AT: 2 - 4:30 - 7 - 9:30 P.M.

FENWAY MASS. AVE. & BOYLSTON ST.
KE 6-0610

SIC FLICS



**"Gee, honey, you'll never
pass your physics exam unless
you learn to loosen up!"**

21 GREAT TOBACCOS MAKE 20 WONDERFUL SMOKES!
GET WITH THE GRAND PRIX . . . ENTER TODAY, ENTER INCESSANTLY!

COME . . . SEE . . . ENJOY

SVERRE ENGEN

in person

and his 1961-62 ski movie

A SKI SPECTACULAR

. . . 2 years production . . .

Thursday, October 19th, 8:30 p.m.
John Hancock Hall, 200 Berkeley St.

Tickets at T.C.A. or at door

Sponsored by White Mountain Ski Runners

Entertainment-wise

See Boston Through Its Music

A series of four outstanding organ recitals by noted American and European organists on the monstrous Holtkamp organ in Kresge Auditorium begins this evening at 8:30, with Andre Marchal, blind organist at Saint-Eustache in Paris and famous recitalist.

Tickets for the entire series (\$5) are on sale in Room (61-026) in Kresge. The other performers are: Piet Kee, young Dutch organist, known for his skill at improvisation (Dec. 6); Donald McDonald, of the First Congregational Church of New Jersey (Feb. 14); and Heinrich Fleischer, University Organist and Professor of Music at the U. of Minnesota (April 11).

The Boston University Celebrity Series is bringing two visiting symphony orchestras to Boston—the Detroit Symphony with Glenn Gould as piano soloist, and the Berlin Philharmonic under the baton of Herbert Von Karajan. The Detroit Symphony performs on Sunday afternoon, Oct. 22, while the Berlin Philharmonic is scheduled for the following Saturday afternoon, Oct. 28.

The Detroit orchestra will play Sibelius, Symphony No. 2; Bach, Brandenburg Concerto No. 5; Strauss, "Burlesk"; Ravel, "Daphnis and Chloe," 2nd Suite.

Mr. Von Karajan will conduct Bach's Brandenburg Suite; Beethoven's "Eroica"; and Stravinsky's Symphony in C.

Tickets for both concerts are on sale at Symphony Hall daily.

Ferrante and Teicher, delightful piano team of "Theme

from Exodus" fame will be at Symphony Hall this Friday, Oct. 20, at 8:30. Tickets at Symphony Hall box office.

Victor Borge, Danish raconteur-comedian-pianist, will be at Symphony Hall for one evening only Saturday, Oct. 2. He is presented in "Comedy of Music."

"The Student Prince", Sigmund Romberg's famous musical from which came some very beautiful melodies, stars Elaine Malbin at the Bradford Roof Theater, Monday, Oct. 23 through Nov. 18. The dinner-theater-dancing package in which this play is included is fairly expensive, but it will provide a memorable evening for any Tech-men who have found that very special girl.

Congratulations to Martin Schrage and Peter Van Aken, who have been selected to push stock in the Charles Playhouse. Warren J. Wiscombe '64

**Coop
PATRONAGE
REFUND CHECKS**

**For Fiscal Year 1960-61
are now available at the
Cashier's Cage**

Kindly call at your earliest
convenience.

The Technology Store

**UNIVERSITY
PAPERBACKS**

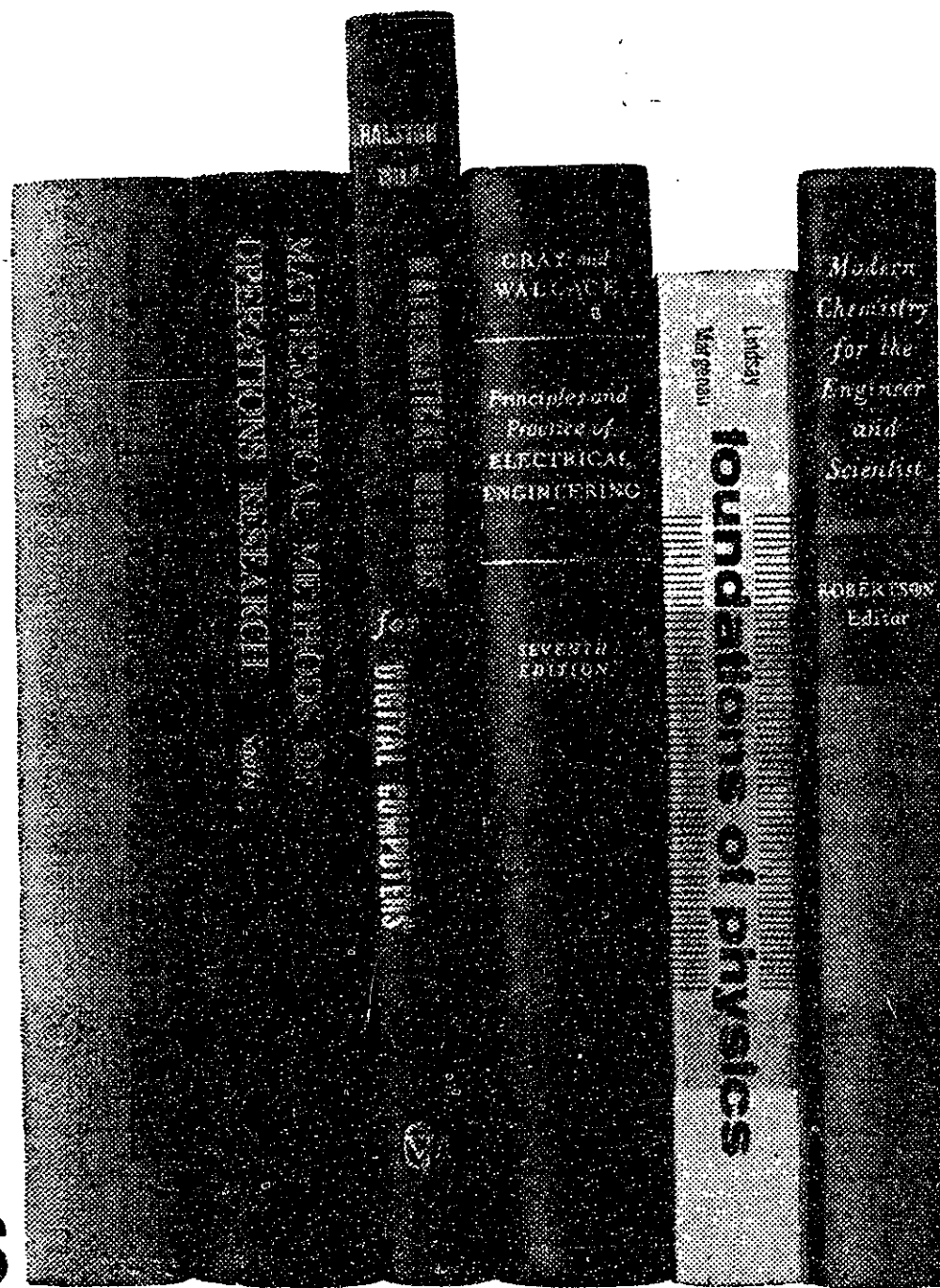
784 Commonwealth Avenue

AS 7-0920

**Everything for your Required
and
Leisure Reading**

Open Mon. thru Thurs. til 10 p.m.

"Come In and Browse Around"



**SYSTEMS
ENGINEERING** can start here... or here... or here... or here... or here... or here

If you are completing studies in engineering, economics, math, science or business, have maintained high averages and are interested in a rewarding professional career, IBM Systems Engineering may be just the career for you.

An IBM Systems Engineer studies problems in industry, science, business and government, and then organizes the most effective electronic data processing techniques and machine systems to solve them. The problems are fascinating and exciting—and include automation of: process control and manufacturing operations, inventory control, document preparation, highway planning, weather forecasting, and complete business control

systems for utilities, transportation, banking and insurance, to name but a few. New techniques of automatic data processing are making headline news almost daily.

Your present training, combined with one of the most comprehensive training programs conducted by any company, prepares you for this fast-growing, dynamic new profession. Openings exist in all principal U.S. cities. All qualified applicants will receive consideration for employment without regard to race, creed, color or national origin. For more information describing the opportunities at IBM, see your College Placement Director or, if you desire, write or call—

P. H. BRADLEY, BRANCH MANAGER, IBM CORPORATION, DEPT. 882
1730 Cambridge Street, Cambridge 38, Mass. Phone: UN 4-6990

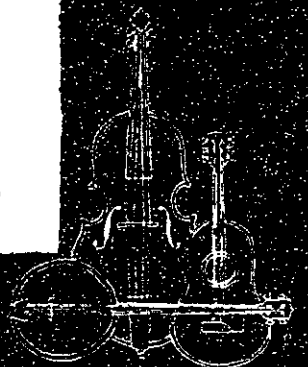
You naturally have a better chance to grow with a dynamic growth company. **IBM.**
DATA PROCESSING

IBM will interview
November 16, March 1

the **Lymeters**

in a two-hour concert
**BOSTON
SYMPHONY
HALL**
Friday, Nov. 3,
8:30 p.m.

Tickets \$4.75, \$3.75, \$2.75
"the finest act . . . in a sunth
of Mondays"
—Herb Caen, San Francisco
Chronicle



Blackout Reveals Inadequacy Of Existing Power System

By Tom Maugh '65

That the Institute power system needs a thorough revamping was decidedly pointed up by the four-hour power failure of October 8, during which most of the Institute was without electricity.

The blackout was the result of the failure of a timeworn transformer. The transformer, which was used in connection with three steam generators, had deteriorated unnoticed, until on the morning of the eighth it overheated sufficiently to set it on fire and to break the insulators around it.

This immediately threw the main circuit breakers, leaving the Institute powerless. Fortunately, a large portion of the maintenance crew was on hand for another project, and was able to start repair work immediately.

Replacements Available

Also fortunate was the fact that there were replacement parts available for the transformer. These were taken from other transformers which had recently been replaced, and much facilitated the repairs.

When the main power went out, there was little emergency power available. The Institute maintains small diesel generators for such emergencies, but it is able to produce only enough electricity for the boiler-room and the main halls and stairways. Thus, many of the experiments in progress at the time were partially or totally ruined.

Organics Labs Hit Hardest

Suffering the most were the organic labs, where many experiments involving constant-temperature baths were either partially or completely ruined, due to the fact that the temperature is electrically maintained. Many experiments, which had been in progress for weeks or even months, were set back indefinitely.

Elsewhere, little damage was apparently done. The IBM 709 computer was not in use at the time, nor were any other major installations. However, it takes little imagination to think of what would have happened if the power had failed at the crucial moment in an important experiment.

New Power Sources

Those portions of the Institute which were not blacked out were the more recently constructed buildings which have a different type of power system. Instead of having the voltage

stepped down to 2300 volts before they receive it, as is done in the older buildings, they receive 13,500 volts, which is stepped down by individual transformers in each building. Thus, if a transformer blows, it affects only that building rather than the entire Institute.

Thus, the Dorrance Laboratories, the Compton Laboratories, and other such buildings had power during the blackout. An exception is the IBM in the Compton labs, which was not planned for when the building was constructed. The transformer was therefore not large

enough to supply power for it, so it was hooked into the regular 2300 volt system.

Emergency Power Planned

The consensus of opinion is that something must be done to provide emergency power to sustain experiments if the main power goes out. However, as of now, there are no definite plans for installation of auxiliary generators in the near—or far—future.

There is a great need, moreover, for improvements in the electrical system in general. For example, the power in building four comes in over a

three-wire system, no part of which is grounded. Thus, it is impossible to adequately ground much of the equipment used in that building.

Alternating Current?

Even the voltage supplied through the lines is not constant, alternating from 120 volts in the early morning to about 90 volts around noon. This, too, can seriously affect the equipment in use and the results of many experiments.

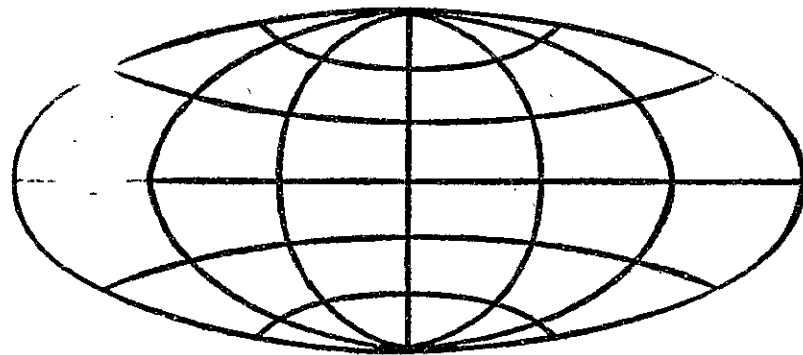
As Mr. Don Whiston, Superintendent of Physical Plant, stated, "There is a lot to be done to the electrical systems

at Tech, and we are doing our best to replace the existing equipment with more adequate. However, this is an enormous task and will take a very long time. Meanwhile, we'll just have to get along as best we can."

CALIFORNIA

Round Trip Air Fares plus tax from \$160 to \$206 * * * why pay more?
Ralph Gordon, student rep.
LA 3-6100
Other flights: Chicago & Florida

JT3D
DIRECT ENERGY CONVERSION
TURBOJET
ROCKET
LIQUID HYDROGEN
LA-115
FUEL CELLS
MACH 3
MAGNETOHYDRODYNAMICS
SATURN
NUCLEAR



**THERE'S
CHALLENGE
TODAY
FOR
VIRTUALLY
EVERY
TECHNICAL
TALENT
AT PRATT &
WHITNEY
AIRCRAFT**

Almost every scientifically trained man can find stimulating and rewarding career opportunities within the broad spectrum of Pratt & Whitney Aircraft activities.

From the solid foundation of 36 years as a world leader in flight propulsion systems, P&WA development activities and research investigations today are far ranging. In addition to continuing and concentrated development effort on air breathing and rocket engines, new and exciting avenues are being explored in every field of advanced aerospace, marine, and industrial power applications.

The reach of the future ahead is indicated by current programs. Presently, Pratt & Whitney Aircraft is exploring the fringe areas of technical knowledge in *magnetohydrodynamics . . . thermionics and thermo-electric conversions . . . hypersonic propulsion . . . fuel cells and nuclear power.*

To help move tomorrow closer to today, we continually seek ambitious young engineers and scientists. Your degree? It can be in: **MECHANICAL ■ AERONAUTICAL ■ ELECTRICAL ■ CHEMICAL and NUCLEAR ENGINEERING ■ PHYSICS ■ CHEMISTRY ■ METALLURGY ■ CERAMICS ■ MATHEMATICS ■ ENGINEERING SCIENCE or APPLIED MECHANICS.**

The field still broadens. The challenge grows greater. And a future of recognition and advancement may be here for you.

For further information regarding an engineering career at Pratt & Whitney Aircraft, consult your college placement officer or write to Mr. R. P. Azinger, Engineering Department, Pratt & Whitney Aircraft, East Hartford 8, Conn.

PRATT & WHITNEY AIRCRAFT

Division of United Aircraft Corporation

CONNECTICUT OPERATIONS East Hartford, Connecticut

FLORIDA RESEARCH AND DEVELOPMENT CENTER Palm Beach County, Florida

All qualified applicants will receive consideration for employment without regard to race, creed, color or national origin.



**COOP
PIPE
ANOTHER
COOP
VALUE
at \$2.69
OUTSELLS ALL
OTHER PIPES
COMBINED AT
TECH
COOP**

Ground-Breaking . . .



Governor Volpe addresses the crowd assembled for the ground-breaking ceremonies at Technology Square as Dr. Killian and others associated with the project look on. In the background is the crane used to scoop out the first "shovel" of dirt.

. . . And Mending



The truck carrying the first shovel-scoop of dirt from Technology Square returns to the scene of the crime after the dignitaries have gone home. The dirt was dumped back into the hole. Technology Square is located between Main and Broadway southeast of Portland Street in Cambridge.

'COGO' Helps Civil Engineers Talk To Computers

The development of a new "language" which will greatly simplify communication between civil engineers and computers has been announced by Professor C. L. Miller, director of the Civil Engineering Systems Laboratory at MIT.

The new computer programming system, called COGO (for coordinate geometry), makes it possible for the engineer to give instructions to digital computing machines using the technical language of the civil en-

gineering profession—the same words one engineer would use in describing a problem to another engineer. The computer understands such words as "locate," "inverse," "intersect," "area," "ramp," "alignment," and similar engineering terms.

Without such a system it is necessary for the engineer to instruct the machine in a primitive or pseudo language more closely related to the machine's circuits than to the engineer's problems. A problem which can be solved with a dozen COGO instructions might typically be equivalent to several thousand machine level instructions.

Operational versions of the system are already in daily use at MIT and at the Puerto Rico Department of Public Works. A COGO system has been specially designed for the new engineering computer to be installed by the Massachusetts Department of Public Works.

The new system is expected to have considerable influence on how civil engineers use computers. Although present operational forms of COGO are already fulfilling a major production role, developments to date are only the first step in a much larger system. "Current research being conducted by the Civil Engineering Systems Laboratory," Prof. Miller said, "is aimed at attaching a drafting machine to the computer. The 'vocabulary' of the COGO language will then be expanded to include the words which the engineer uses in communicating with a draftsman. The ultimate goal is a machine-aided design system which completely frees the engineer from the routine chores so that he can devote his full attention and talents to the creative and imaginative thinking role for which he is professionally trained."

Hobby Shop Projects Test Tech Ingenuity

(Continued from page 6)

photography contest to be sponsored by the Hobby Shop to encourage interest in photography and use of the Shop's dark-room.

Not Enough Students

Although it has been established for nearly 25 years and is exceptionally well-equipped, Mr. McCadden complained, "Not enough students know about the Hobby Shop who might want to use it." According to the register in which users are supposed to sign in and out about 15 to 25 people use the Shop each day at present.

Hours of the Hobby Shop are 9-5 Monday through Friday, and Wednesday evenings until 9. No limitations exist on projects that may be undertaken except on items, like firearms, which are definitely unsafe and therefore against Institute policies.

Putnam Exam Slated Dec. 2

The William Lowell Putnam Mathematical Competition, open to all undergraduates throughout the United States and Canada, will be given Saturday, Dec. 2. The annual examination, which is given both in the morning and afternoon, offers cash prizes ranging from \$35 to \$75 to the top 10 contestants.

Anyone interested in taking the test who has not yet registered should see Prof. G. C. Rota, Room 2-272, or Dr. J. I. Richards, Room 2-369, immediately.

OTS Applicants Sought

Students interested in the Officer Training School for qualified college graduates who have had no prior military training should contact Captain Sena of the Air Science Department.

There are a limited number of places available.

T-Club To Meet Tomorrow In DuPont Fencing Room

The T-Club will meet for the first time this year tomorrow evening, Thursday, October 19, at 7:30 in the Fencing Room at DuPont Athletic Center.

At that time a number of matters will be discussed: the annual T-Club fall picnic will be held October 28, at the Riverside Boat Club. This is located about two miles up Memorial Drive from MIT. The picnic starts at 6:00 p. m.; games and dancing will follow the food. Tickets at \$2.75 per couple are on sale now in Building 10 lobby, at the Athletic Association office, and from all team captains.

Currently, the T-Club is attempting to raise \$900 for a new lounge, to be used by T-Club members. The proceeds from the fall picnic will go towards this fund; in addition, the organization is considering selling food at Field Day and sponsoring a dance after the Harvard-MIT basketball game, in hopes of earning more money for the lounge.

DOING IT THE HARD WAY by *haff*
(GETTING RID OF DANDRUFF, THAT IS!)



easier 3-minute way for men: FITCH

Men, get rid of embarrassing dandruff easy as 1-2-3 with FITCH! In just 3 minutes (one rubbing, one lathering, one rinsing), every trace of dandruff, grime, gummy old hair tonic goes right down the drain! Your hair looks handsomer, healthier. Your scalp tingles, feels so refreshed. Use FITCH Dandruff Remover SHAMPOO every week for positive dandruff control. Keep your hair and scalp really clean, dandruff-free!



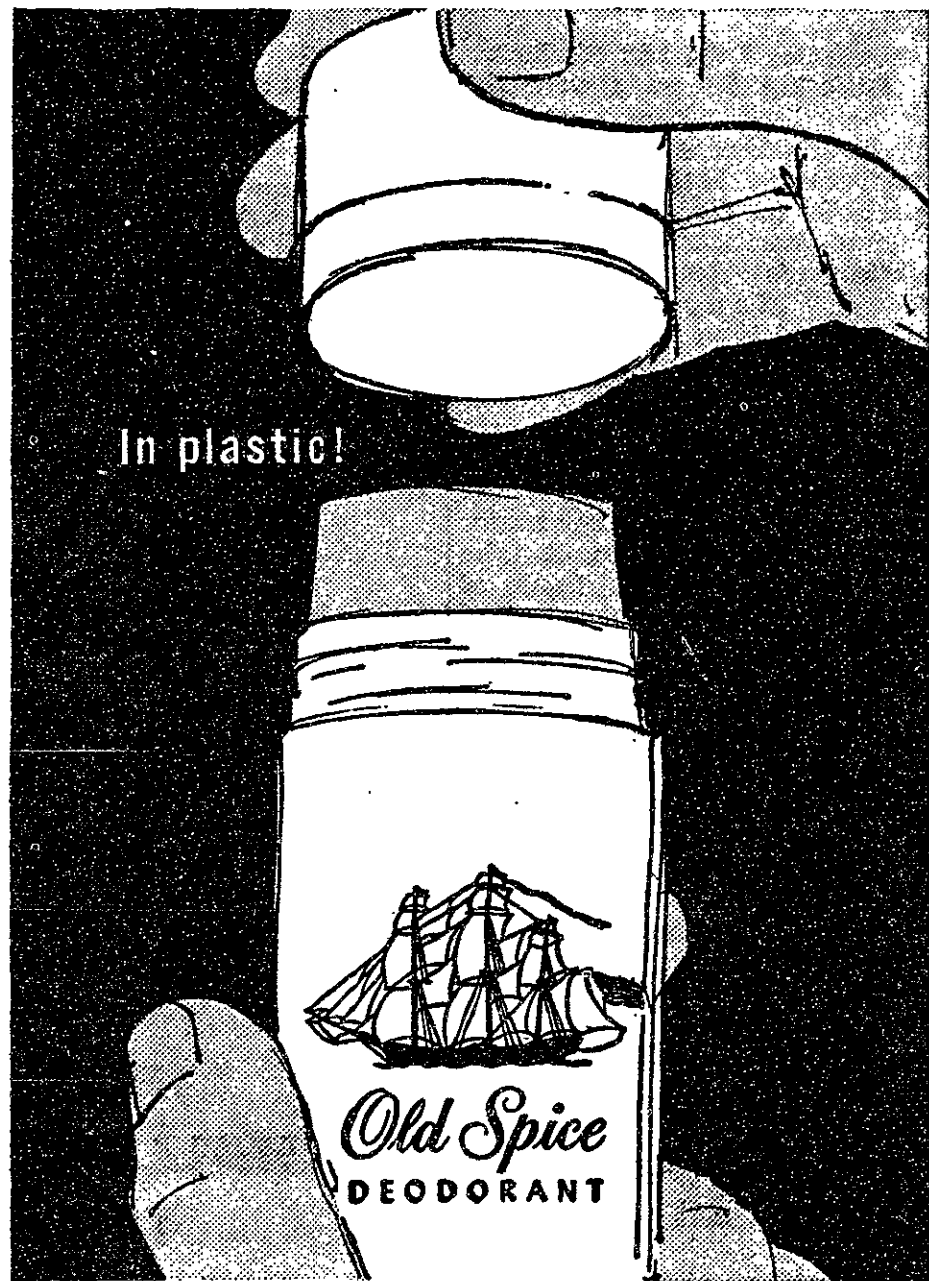
FITCH
LEADING MAN'S
SHAMPOO

"THE WORLD'S GREATEST GOSPEL SINGER" Mahalia Jackson

Symphony Sun. Oct. 29
Hall 8:30 P.M.

Tickets
\$4.00, 3.50, 2.75, 2.00

MEN!



In plastic!

Here's deodorant protection

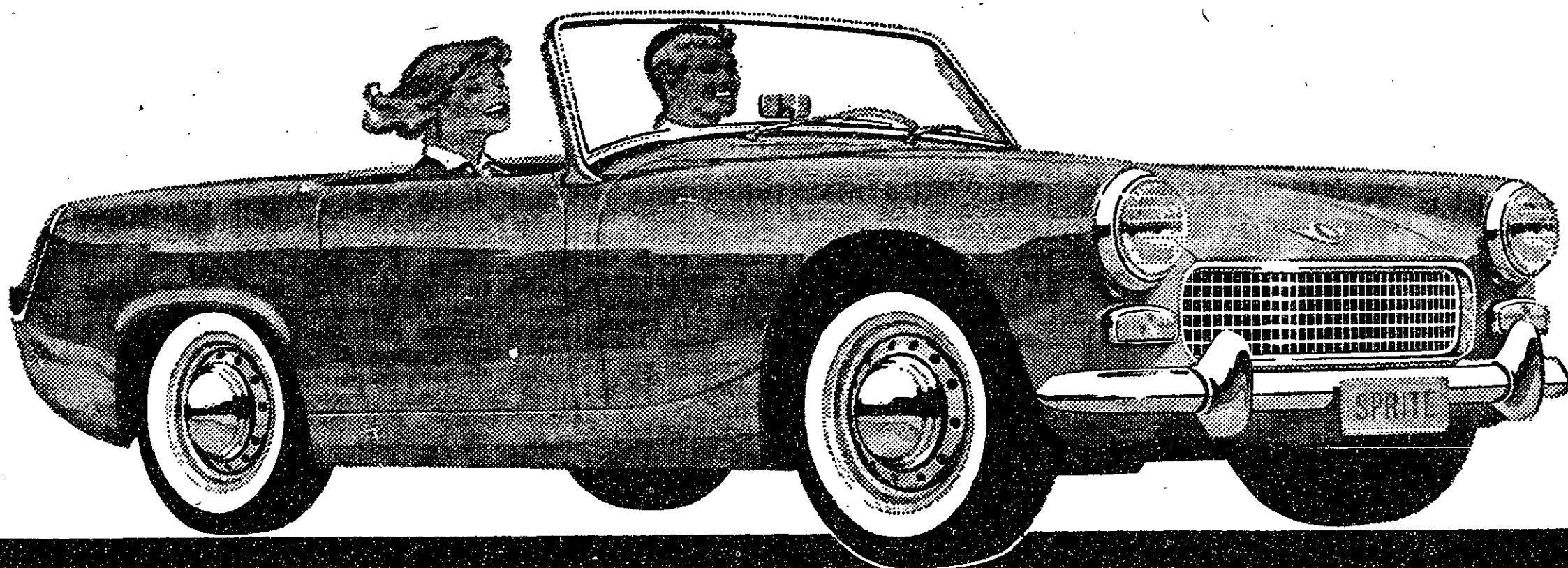
YOU CAN TRUST

Old Spice Stick Deodorant... fastest, neatest way to all-day, every day protection! It's the active deodorant for active men... absolutely dependable. Glides on smoothly, speedily... dries in record time. Old Spice Stick Deodorant — most convenient, most economical deodorant money can buy. 1.00 plus tax.

Old Spice **STICK DEODORANT**
SHULTON

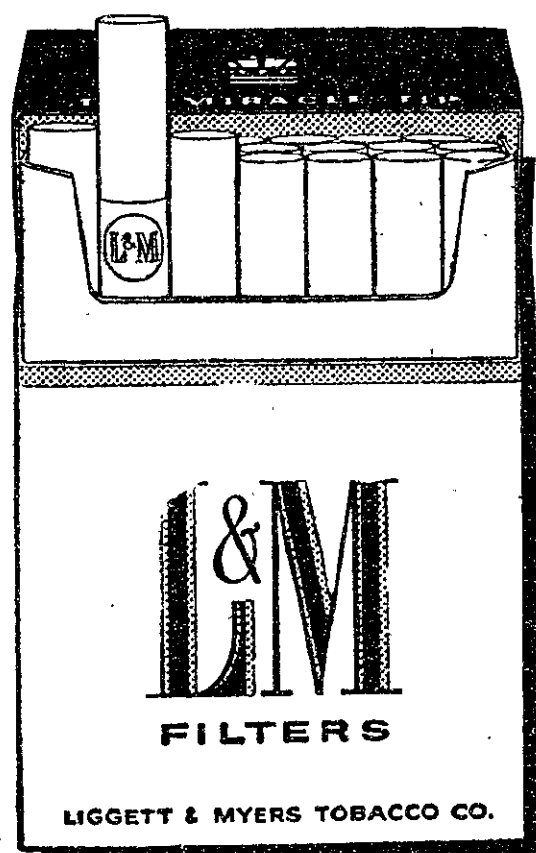
Available at Tech Coop

Like Free!



It's sporty, it's speedy, it's a **SPRITE** ...and it's yours!

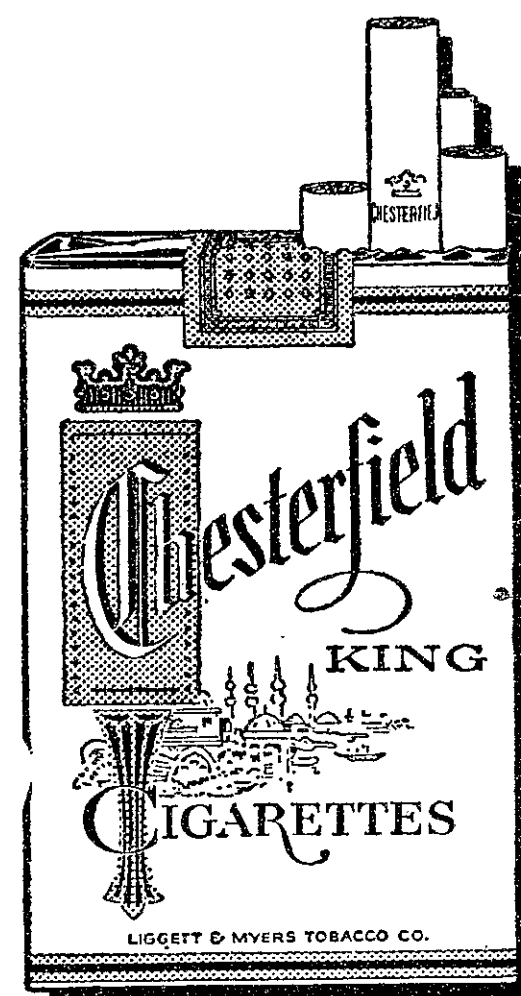
All you have to do is like win!



PACK OR BOX

Grand Prix CONTEST

FOR NEW ENGLAND COLLEGE STUDENTS



REGULAR OR KING

Here's the story, man. Eight, count 'em, eight of these swinging Sprites will go to eight guys or gals in New England colleges. The other 44 states strictly don't count. Get the picture, get the odds? This is one deal you've got to get in on.

First thing to do, get your hand on a Registration Envelope, which gives you the easy Contest Rules. You'll find Registration Envelopes *everywhere*—all around campus and in your local smoke shops. Our Liggett & Myers Campus Rep has stacks of them, too—so track him down.

Next, you take a little quiz. It's printed right on the envelope, see, it's about sports cars and you can do it in like 47 seconds. Then smoke 5 wonderful packs of Chesterfields

**8 PRIZES
NEW ENGLAND WINNERS
'62 SPRITES 8**

or L&M's (or, if you're a menthol man, Oasis), tear the bottom panels off all 5 packs, tuck them in the envelope, sign your name and mail it.

Now comes the brain work. If you pass the quiz you'll receive a limerick in the mail with the last line missing. So finish it! Send in the best rhyme you can think of. If the judges (an independent, impartial lot)

think your line is the cleverest, you're like behind the wheel of your Sprite already.

Enter incessantly! Because there are 8 Sprites up for grabs, dad! The 4 winners of the Fall Contest will be announced at the end of the Fall Semester. Then the whole jazz goes into high gear again—and toward the end of the Spring Semester the other 4 Sprites go on the block. So stay with it all year—keep smoking those wonderful Chesterfield, L&M or Oasis cigarettes—keep trying! Win, man!

Buy 5 packs and get started. There will be 8 new '62 Sprites on the campuses of little old New England by next May, and you might as well jingle the keys to one of them in *your* jeans... right?

GET WITH THE GRAND PRIX...ENTER TODAY, ENTER INCESSANTLY!

Great Teams In MIT Past

By John Butler '65

Intercollegiate cross-country running is one of the older sports at MIT, having started in 1902. Tech has had many outstanding teams and individuals in the sixty years of competition. The teams have won the New England Intercollegiate Championships four times: 1917, 1920, 1943, and 1954; they have come in second seven times. The cross-country team from MIT is always a respected contender.

The team in 1920 was the most outstanding of them all, winning all their regular season meets and the New England's and then going on to the Inter-Collegiate Amateur Athletic Association of America's meet, where they placed third in what was essentially the eastern championships. The IC4A is one of the oldest and most important competitions in the world of track.

Cross-country is one of those sports where the final result is a team effort, but a great deal can ride on the performance of one outstanding individual. A large factor in the victories of 1920 was the presence of William K. MacMahon '22, better known as Captain Billy. In 1919 he was third in the New England's and second in the IC4A. In 1920 he was the captain on an even more talented team and placed second in the New England's, and fifth in the IC4A. Because of a change in the eligibility requirements, Captain Billy was not allowed to run in 1921.

There have been other brilliant runners in the history of cross-country at MIT. Morton Jenkins '35 came out for track in the fall of 1933 and soon gained prominence. He finished second in the New England's and sixth in the IC4A, better than anyone since Captain Billy. Unfortunately, he hurt his leg the next year, but he still finished twelfth in the New England's and eighteenth in the IC's.

Another prominent figure was John Serrie '46. He was third in the New England's of 1944 and fourth in the IC's.

In 1954 MIT had another outstanding team. They won all their regular season competition and the New England's. Going on to the IC4A meet, they finished above all other New England colleges with a distinguished fourteenth overall. The teams from 1950-1954 had led up to this victory; by

establishing a solid tradition of winning, they inspired greater things in teams that followed. Those teams had placed second twice, third once, and fifth once in the New England's, and in regular season competition won 19 out of 21 meets.

The coach of most of these outstanding teams was Oscar Hedlund who coached at MIT for 35 years. Coach Hedlund was a runner himself, having once held the world indoor mile record. He knew the problems that the boys faced with the institute, as well as on the track.

Oscar emphasized at all times the development of individual character and ability, and made available training for every man who came out for the team, regardless of ability. His accomplishments are another integral part of the MIT tradition in cross-country running and many other sports. The tradition is now being carried on by Coach Art Farnham.

It may seem surprising, but MIT does have a tradition in the sport of cross-country running, and it also has the capacity to maintain this tradition in the years to come. Cross-country is typical of most of the sports at MIT, in that it has had its fair share of really great teams, and can expect many more in the future.

Harriers Last In Tri-Meet

Both varsity and freshman cross-country track teams came out on the bottom of a three-way track meet with Springfield and Williams last Saturday. In varsity competition, the score was Springfield 21, Williams 48, MIT 55; for the freshmen, it

As in any other racing sport, the object of cross-country track is to cover a given distance in the least time. Each team enters a pack of runners, many of whom will never figure in the score.

To finish a varsity race a runner must cover between four and four and a half miles amidst competition—a grueling test. But this is not simply a sport of individuals; winning a race requires the concentrated efforts of all the members of a well-conditioned, organized team.

In cross country points are allotted per man according to his finishing position (two points for second place, three for third, etc.). The first six men from each team figure in the scoring, so that first place alone is far from sufficient to insure a victory. Under this system, the lowest score wins, and a perfect score of fifteen can be attained by placing all of the first six finishers.

Needless to say, good physical conditioning is a must for a harrier. A natural agility, stride, and sense of rhythm are valuable attributes. Include with these ingredients a willingness to punish oneself to one's physical limit and you have a good runner.

But there is more to cross country than simply running yourself into the ground. Minimum time per unit effort can be achieved only by experienced and careful pacing. Then all-out effort can be combined with this pace to optimize a harrier's effectiveness. Some run a fast pace, hoping to open up enough of a lead to place-high, even af-

ter they tire early; others begin slow and build up to the final sprint. The best pace is a steady one, built up through leagues of practice running, and maintained until the final stretch, when the runner gives his all.

How does one develop a good pace? Frequently a coach will insist that his men become accustomed to running a single, under-five-minute mile. Once a harrier has done this it is not as difficult as it may sound to expand his distance while maintaining this pace.

Sometimes a team will tactfully insert a "dummy" into the race. This man (usually not a gifted runner) virtually burns himself out in the first few miles with the purpose of quickening the pace so as to draw the opposing runners ahead of their own best speed. An experienced, subtle dummy can effectively lure a worthy opponent and his mates of their pace, so that they, like himself, become exhausted early. Then the dummy's own comrade come on strong to win a match they otherwise might have lost. A coach with a large squad may send in four or five dummies;

they are a frightening sight to even an experienced rival coach.

The "dummy" is one illustration of teamwork on the course. It takes teamwork on the part of the adversaries to avoid the pitfall they create. A harrier may pace himself by his mates, with whose speed he is familiar. While cross-country is a test of individual physical endurance, a squad can do its best only when its constituents work as a unit.

How They Did

Soccer

MIT 3, Tufts 1
MIT 1, Middlebury 1

Golf

MIT 6, Rhode Island 2

Cross Country

Springfield 21, Williams 48,
MIT 55

Frosh Soccer

Andover 5, MIT 1
Tufts 5, MIT 3

Frosh Cross Country

Springfield 22, Williams 48,
MIT 55.

"NAVIGATION IS OUR BUSINESS" at AC SPARK PLUG

The Electronics Division of General Motors

Our current projects include development and production of Inertial Guidance Systems for the TITAN II, THOR and MACE missiles. We are also the Systems Integration Manager for the modified B-52C&D Bombing Navigation System. In the commercial field, AC has developed and is now producing a new mobile radiotelephone. Research and development programs include navigation systems for mobile ICBMs, space vehicles, supersonic aircraft and ocean-going vessels.

AC is seeking qualified engineers and physicists to fill permanent positions in Milwaukee, Boston and Los Angeles. You may qualify for employment if you have a BS or MS degree in Electrical Engineering, Mechanical Engineering or Physics. Advanced positions are also available for men who are completing their doctorates with specialization in navigation and related fields.

To provide a transition from academic learning to practical career development AC offers the following training programs:

MILWAUKEE

Career Acceleration Program — A twelve-month program with formalized classroom instruction given in conjunction with rotating job assignments in Manufacturing, Reliability and Engineering. Courses include:

Ballistic and Cruise Missile Laboratory Sessions	Basic Principles of Inertial Guidance
Advanced Servomechanisms	Semi-conductor Technology
Principles of Airborne Digital Computers	Probability and Statistics
	Philosophy of Reliability

Field Service Program — Two- to four-month classroom and laboratory training on inertial guidance systems or bombing navigation systems. Domestic and foreign assignments follow completion of program.

BOSTON

Advanced Concepts Research and Development On-the-Job Training Program — AC's Boston Laboratory is engaged in developing advanced inertial guidance equipment primarily for application in earth-bound vehicles.

LOS ANGELES

Advanced Concepts Research and Development On-the-Job Training Program — AC's Los Angeles Laboratory is occupied with advanced guidance research for space vehicles and ballistic missiles, plus advanced research in special purpose digital computers.

See your College Placement Office regarding an appointment for a personal interview with the General Motors and AC Representative.

CAMPUS INTERVIEWS

Wednesday, October 25, 1961

If unable to apply in person send résumés to Mr. G. F. Raasch, Director of Scientific and Professional Employment, Dept. 5753, 7929 South Howell, Milwaukee 1, Wisconsin.

An Equal Opportunity Employer

Ask your Placement Officer for AC's new Employment Brochure.

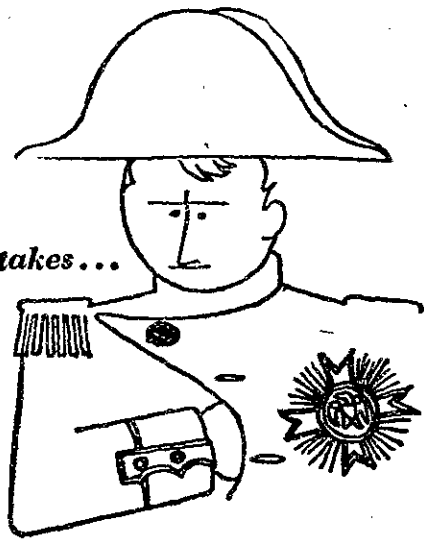
AC SPARK PLUG

The Electronics Division of General Motors

MILWAUKEE • LOS ANGELES • BOSTON

Achiever Inertial Guidance Systems for Titan II, Thor and Mace. Bombing Navigation Systems for the B-52C&D and B-47. Achieverfona Mobile Radiotelephone Systems.

We all make mistakes...

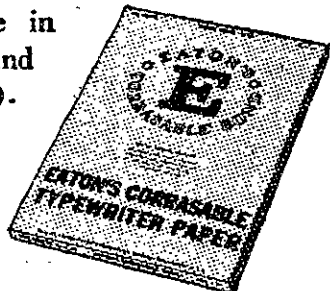


ERASE WITHOUT A TRACE ON EATON'S CORRASABLE BOND

Don't meet your Waterloo at the typewriter—perfectly typed papers begin with Corrāsable! You can rub out typing errors with just an ordinary pencil eraser. It's that simple to erase without a trace on Corrāsable. Saves time, temper, and money!

Your choice of Corrāsable in light, medium, heavy weights and Onion Skin in handy 100-sheet packets and 500-sheet boxes. Only Eaton makes Corrāsable.

A Berkshire Typewriter Paper



EATON PAPER CORPORATION PITTSFIELD, MASS.

Available at Tech Coop

Betas Face DU Sunday For IM Crown

By Jay Salmon '63.

Beta Theta Pi and Delta Upsilon advanced to the finals in A division football this weekend, while in the B division East Campus and Student House racked up victories to advance to the semifinals along with Theta Delta Chi and Sigma Nu.

Saturday DU edged SAE, 7-6, in a tight defensive battle. DU broke the game open late in the second period when Paul Olmsted '62 tossed a screen pass to Jim Allen '64 who carried for 35 yards and the score. The extra point and the margin of victory came on an Olmsted pass to Jeff Paarz '63. SAE

came back to score early in the third period on an end run by quarterback Mickey Haney '62 from the three yard line. The crucial try for point was another attempted end run by Haney, but Tony Weikel '63 got in to break up the play and save DU's victory.

In the other semifinal game Sunday, the Betas overcame rain, cold and stiff Lambda Chi Alpha defense to triumph 30-0. The game was tied 0-0 late in the second period when the Beta offense got rolling on a series of end runs and short passes by quarterback Dick Pickett '62 who passed to Warren Goodnow '69 for the score. On the drive, Dave Sikes '63, LXA's offensive spark, was injured and the Lambda Chi's never again mounted a serious offensive threat. Pickett hit Harold Bran-



DU quarterback Paul Olmsted '62 is halted by SAE linebacker Tom Taylor '63, after bursting through a hole opened up by Robin Lytle '62 (right). DU won by the narrow margin of 7-6, in the season's closest important game.

son '63 for the point, and from there on it was all Beta Theta Pi. In the second half Pickett ran for one score and passed to Tom Gerrity '63 and Branson

for two more as the Betas rolled on. In four games so far, the Betas have tallied 175 points, and are unscored upon.

In the B Division, East Campus dropped NRSA 34-0, and Student House felled Delta Kappa Epsilon 18-12 in an overtime, to clinch the League VIII and IX crowns respectively. Sunday, East Campus came back to whip Baker House 21-0 and thus gain a berth in the B Division semifinals.

East Campus scored their first TD on a five yard run by halfback Norm Weeks '63; quarterback John Costello '62 passed to end Bob Petrich '63 for the other two as Baker House could not get their passing attack going in the rain and cold. East Campus' balanced attack enabled them to keep the Baker House defense off balance and move despite the weather.

Next weekend finds DU and Beta squaring off at 1:30 Saturday for the A Division championship, followed by East Campus and Student House in a B Division semifinal at 3:30. Sunday, Theta Delta Chi and Sigma Nu go at 1:30 in the other B Division contest, and SAE takes on LXA at 3:30 in the A consolation game.

Golfers Top RI, 6-2; ECAC Finals Saturday

The University of Rhode Island fell for the second time this fall to the powerful MIT golf team. Playing at Point Judith, R. I., Tech's golfers won in medal play by a score of 6-2. On Saturday the linksmen travel to Farmingdale, New York, for the finals of the Eastern Colleges Athletic Conference tournament.

At Rhode Island, MIT won five matches, lost two, and gained a point for total team score. Captain Chuck Gamble '62, Alden Foster '62, Phil Robinson '62, Raul Karman '62, and Archie Thomas '62 beat their opponents, while Bill Graham '63 and Neil Hull '63 lost their rounds.

On October 7, Tech qualified for the ECAC finals at Dartmouth, finishing second to Williams, and edging out Boston College and Holy Cross. Gamble and Foster finished in the top ten at the qualifying round.

Saturday's tournament will feature eight teams, two from each of our districts; teams will consist of four men. In addition, several individual players will compete, who finished in the top ten themselves, but whose teams did not qualify.

John Merriman Jr., golf team coach, was not optimistic about the team's chances in the New England championship. The team has not been playing as well as it did last spring, principally due to lack of practice during the fall season. However, if Foster, Gamble, Karman, and Robinson all have a good day, MIT could finish surprisingly near the top in the tournament.

On Deck

Today, October 18

Soccer (F) with Harvard, Briggs field, 3:00.

Saturday, October 21

Soccer at Air Force Academy. Cross-Country (V & F) with New Hampshire, 2:00.

Golf at ECAC finals, Farmingdale, New York.

Monday, October 23

Soccer (F) with Belmont H. S., Briggs field, 3:00.

Wednesday, October 25

Soccer with Boston University, Briggs field, 3:00.

PRICE IS RIGHT

SBLI Savings Bank Life Insurance has always been a good buy for men, women and children age 15 days to 70 years — in amounts from \$500 up. Now, there are even greater savings for those who need \$3,000 or more protection. New even lower rates have been adopted on many "economy-size" policies. Ask for new rate folder showing kinds, rates and benefits for all ages.

CAMBRIDGEPORT SAVINGS BANK
(Right in Central Sq.)
Cambridge, Mass.
Phone UN 4-5271

SENIORS:

YOU'D BE SMART TO TALK WITH THE MAN FROM Con Edison

For both technical and non-technical graduates, Con Edison offers a career in New York... the most exciting city in the Country!

New York is ever-growing. To keep ahead of this dynamic city, we at Con Edison are now in the midst of a \$1 Billion Program of expanding our vast electric, gas and steam services. This tremendous growth has triggered an immediate need for good men... men of vision and vitality.

Your job with us means a creative assignment right at the start. Our carefully planned program for college graduates offers a good starting salary and opportunities for rapid advancement... and there's nothing static about a job with Con Edison! Want proof?

Before most of today's graduates reach thirty-six years of age, no less than 776 top management positions at Con Edison will be filled by new faces... mainly through retirement. That means countless opportunities to move into key positions all the way up the line!

Our interviewers will be here at **M.I.T. OCTOBER 26** to tell you about the unusual job opportunities Con Edison can offer you.

Be sure to speak with one of our interviewers when they visit the campus. Meanwhile, pick up a copy of our book, "Con Edison—The Right Place To Build Your Future". You'll find copies in the Placement Office.



Wonderful Wash'n'Wear

***B.V.D. UNDERWEAR** AT NO INCREASE IN PRICE

WASH 'N' WEAR SHORTS Sizes 28 to 44

WASH 'N' WEAR KNIT BREVS Sizes 28 to 46

WASH 'N' WEAR TEE SHIRTS Sizes S,M,L,XL

WASH 'N' WEAR ATHLETIC SHIRTS Sizes S, M, L, XL

69c 3 for \$2.05

89c 3 for \$2.65

"next to myself I like 'B.V.D.' best!"

every "B.V.D." garment must completely satisfy or return for immediate refund

TECH COOP

*Reg. U.S. Pat. Off. and foreign countries

Soccermen Roll Toward New England Championship

Last week the varsity soccer team moved closer to the New England championship with a win and a tie against two principal opponents. On Saturday, Middlebury came from behind in the fourth quarter to tie the Techmen, 1-1; on Thursday,

MIT rolled easily over Tufts, 3-1.

The Tufts victory was particularly pleasing since Tufts upset Tech last year, 3-2, thus spoiling a 3-0 record and what appeared to be the start of a fine season, Middlebury, which has not beaten MIT yet, played

an exceptionally fine game, holding the engineers to their lowest score of the season.

At Middlebury, MIT played their best soccer of the season. Early in the first quarter, Bob Mehrabian '64 took a long pass at midfield, carried the ball downfield, with the Middlebury

fullbacks in pursuit, and blasted home a hard shot as their goalkeeper came out to defend the net. MIT continued to hold the Middlebury offense in check for the remainder of the first half, allowing no real threats.

Rain descended upon the field during the entire second half, and it worked to Middlebury's advantage. MIT customarily plays a close, ball-controlling game, while most of its opponents play a wide-open, long-passing game. On the wet grass, Tech was unable to maintain control of the ball, and had no more good scoring opportunities.

With the engineers leading 1-0 in the final quarter, Middlebury's cheering fans inspired a concentrated attack; after a number of passes and threats, a shot from 30 yards out took a bad bounce in front of goalie Dave Dunford '64, and tied the score, 1-1. Neither team managed to score in two five-minute overtime periods; the tie marks the first time this year that MIT has not solidly defeated its opponents.

The Tufts game was comparatively easier: Cord Olenbusch '62 opened the scoring with a high, hard shot midway in the first period. Tufts tied it up early in the second quarter, but Jim Tang '63 put the engineers back in front before the half. Mehrabian netted Tech's final goal late in the third quarter. Final score: MIT 3, Tufts 1.

Tomorrow the soccer team will board a jet plane at Logan Airport and head for Denver, Colorado, where they will face the Air Force Academy on Saturday. This marks the greatest distance an MIT team has ever travelled; the game is part of a two-game series which saw Tech defeat the Air Force 2-1 last year here in Boston.

The team will spend Friday getting accustomed to the thin-

ner air in mile-high Denver; several Oxygen tanks will be on hand at the MIT bench to bolster players coming off to rest. Last year Cambridge's unique air worked to Tech's advantage, slowing down the Airmen, who were accustomed to a fresher, thinner brand.

Having no foreigners, the Air Force plays the wide-open "American" style of soccer, featuring long passes. They have no exceptional stars, but a strong, well-balanced team in superb condition. The game promises to be interesting and close. The Techmen will return by jet on Sunday.

MIT's showing so far this year has been a real surprise. At the beginning of the year, there were some doubts about whether many players would be willing to sacrifice study time to come down and practice regularly. Tech also lost an All-New England defenseman, Tom Geers, through graduation. Although the first opponents, Amherst (undefeated last year), scored first and opened up a 2-0 lead, MIT kept scrapping and pulled even 3-3, winning in overtime, 4-3. This was a very important victory for MIT, and provided much of the spirit which has carried the team this season. After defeating WPI the team scored another upset in downing Trinity 2-0; that game was marked by sparkling goaltending by Dave Dunford, and a tremendous team effort.

MIT's record stands at five wins, one tie, and no defeats, which gives them a strong grip on first place in New England.

Frosh Bow Twice

MIT's freshmen lost two soccer games last week, first at Andover, 5-1, and then against Tufts at home, 5-3.

Andover played a fast game and managed to control it by making long kicks on defense and keeping forwards ready for a downfield dash. Andover scored in the last minute of the first quarter on a fast break twice in the second quarter, on kick-ins, and once each in the third and fourth periods. Tech's lone goal came after a skirmish in front of the goal with two minutes left in the game.

Against Tufts, MIT controlled the ball most of the time, but got very few shots. Tufts managed to score three of their five goals on fast breaks, combined with excellent passing. Tech scored once in the third quarter, on a head-in, and twice in the fourth, once on a penalty kick, and once on a chest-in.

This afternoon the freshmen face Harvard at 3:00 on Briggs field.

Sailors Fourth At CG; Frosh Win On Charles

Last weekend the MIT sailors finished fourth out of twelve in the Danmark Trophy race at the Coast Guard Academy. Coast Guard, Brown and Boston University finished in that order ahead of Tech.

The annual Danmark regatta is the high point of the fall sailing season; in its twenty-year history, the trophy has gone to MIT five times, Coast Guard four times, Boston University and Harvard three each. B.U. took the cup last year.

Ken Klare '62 and Henry Weil '64 skippered the MIT dinghies, and both performed excellently in the early races of the meet. Unfortunately, in the final race, Weil the B division skipper, capsized at the leeward mark, giving the Engineers no finishing points for the last race. This was the fourth consecutive regatta in which Tech has fallen down in the closing race.

Next weekend will be a busy one for the sailors, as they return again to the Coast Guard Academy to compete in the New England sloop finals; part of the team will go to Brown University to seek the Hoyte Dinghy trophy.

Tech's freshmen won the Freshman Octagonal Meet here on October 15. Defeating Coast Guard by seven points and Schools Sailing Club, B.U., Holy Cross, and Bowdoin by more, the team remains undefeated on home waters, having won a similar meet two weeks ago. Next weekend the Nautical association will sponsor the New England freshman championship, on the Charles; races begin at 10 a.m. Saturday.

Second class postage paid at Boston, Massachusetts. The Tech is published every Wednesday during the college year, except college vacations, by THE TECH, Walker Memorial (50-211), MIT, Cambridge, Mass. Telephone TRow-bridge 6-5555, 5555, or UNIVERSITY 4-6900, extension 2731.



Faking out two Tufts defensemen, Jim Tang '63 deftly boots the ball to a teammate to set up another score for MIT. The Engineers rapped Tufts by the score of 3-1, strengthening their hold on first place.



Do all Air Force Officers have wings?

Decidedly not. In fact most executive jobs are on the ground. Of course, all officers may apply for pilot and navigator training if they meet the eligibility requirements. There will always be a need for piloted aircraft. And it is foreseeable that in your working lifetime, there will be piloted spacecraft—piloted and navigated by Air Force officers.

But right now, there is also a big future for college-trained Air Force officers on the ground. New and exciting technical jobs are opening up. Important administrative positions must be filled as World War II officers move into retirement.

How can you—a college student—become an Air Force officer? First, there's Air Force ROTC. Then for college graduates, men and women in certain fields, there is Officer Training School. The graduate of its three-month course wins a commission as a second lieutenant. Other ways are the Navigator Training program, and the Air Force Academy.

Some benefits that go with being an Air Force officer. Starting salary plus allowances compare with the average in equivalent civilian jobs. Then there's free medical and dental care, thirty-day vacation, the chance to win graduate degrees at Air Force expense, and liberal retirement provisions.

No, Air Force officers do not need wings to move up. There's plenty doing on the ground. Perhaps you could be one of these young executives in blue. Ask your local Air Force Recruiter. Or write, **Officer Career Information, Dept. SC13, Box 7608, Washington 4, D.C.,** if you want further information about the navigator training or Officer Training School programs.

U.S. Air Force

There's a place for professional achievement on the Aerospace Team