

73 YEARS PROGRESS SHOWN TODAY

Paint Mural From Life in Exhibit of Architect Students

Men Will Continue Regular Work in Building 2 During the Day

VISITORS WILL INSPECT FINISHED DRAWINGS ALSO

Model Lighting System, Work of Undergraduate Thesis, Is Part of Exhibition

Painting of a mural with a living model is one of the contributions of Course IV to Open House, together with many other illustrations of architects at work. The mural, eight by ten feet, is being painted by one student.

The architectural department will take over five rooms in Building 2, where there will be students engaged in the usual routine work of the architect. In Room 2-151, men will be doing free hand drawings, in Room 2-147 and 2-143 they will be working on problems in design; in Room 2-139 will be modeling and color; and in Room 2-135 will be Architectural Engineering and Office Practice.

View Finished Drawings

In addition to watching the architects at work, visitors will have the opportunity to inspect the work which they have done during the past year. Three hundred linear feet of drawings will be displayed throughout the rooms occupied by the department. These drawings are finished problems which have been given to the students to complete during the year. They are designs for many different types of buildings and represent many styles of architecture. These problems are the result of many hours spent by these students with most painstaking care and accuracy in detail. Included are designs for such constructions as railroad stations, bus stations, museums, airports, memorial islands, gymnasiums, wine cellars, and other practical drawings.

An added feature to the exhibition is the display of a model lighting system, on which one student is working as a part of his thesis.

PROGRAM

2 o'clock
Building Construction Slides and Motion Pictures, Room 5-240.
High Speed Motion Pictures, Room 5-330.
Motion Pictures, Engineer Corps, Room 3-370.
Exhibition of High Voltage Discharge, Room 10-250.
Electrons and Light, Room 6-215, until 5 o'clock.
Student Lecture Demonstration in Physics, Room 10-275.
Operating Model of Van De Graaf Generator, Room 4-370.
Sports Review, Hangar Gymnasium.
2:15 o'clock
Richards Cup Crew Race, Charles River.
2:30 o'clock
Movies of Breaking of Brass Strip, Room 2-080.
One Act Play, "When the Ship Goes Down," Room 2-190.
Anti-Aircraft Guns in Front of Hangar Gymnasium.
Operating Model of Van De Graaf Generator, Room 4-370.
3 o'clock
Chemistry Lecture and Tesla Coil Demonstrations, Room 10-250.
Siphon Spillway, Room 3-150, until 5 o'clock.
River Hydraulic Models, Building 21, until 5 o'clock.
Model Earth Fill Dam, Room 1-335, until 5 o'clock.
High Speed Motion Pictures, Room 5-330.
Torsion, Tensile, and Spring Testing, Room 1-210, until 5 o'clock.
Student Lecture Demonstration in Physics, Room 10-275.
Operating Model of Van De Graaf Generator, Room 4-370.
Technique Rush, Tech Field.
3:15 o'clock
Movies of Breaking of Brass Strip, Room 2-080.

(Continued on Page 8)

ENGLISH OPTIONS GIVE THREE PLAYS

For the benefit of Open House visitors, three one-act plays will be presented this afternoon in Room 1-190 by students in the Drama Option of second year English.

The plays will be staged at one-hour intervals starting at 2:30 o'clock when the visitors will view "When the Ship Goes Down," by McGuire. At 3:30, the play will be "Where the Cross Is Made," by O'Neil, and at 4:30, "Shall We Join the Ladies," by Barrie.

These plays were presented as a regular part of the Drama Option of the English course by the different groups for the benefit of the members of the option. The students take all the parts in the plays including the staging and lighting. Members of the Drama Club, a club composed of faculty members, their wives and daughters, and the wives of Technology students, are assisting by taking the feminine roles.

Airplane to Ground Communication Will Be Demonstrated

Two-Way Radio Broadcasting Will Be Featured by Signal Corps

PLANE WILL BROADCAST TECHNIQUE RUSH IN AIR

Military Science Department Demonstrates Use of Homing Pigeons

Two-way radio communication between an airplane in flight and the ground, with the messages rebroadcast over a public address system on Tech Field, will feature the R. O. T. C. Signal Corps program today. In addition visitors will be allowed to send messages, by homing pigeon, which will be rebroadcast over the public address system as soon as the pigeons reach their home loft.

The plane-ground communication demonstration, which will take place at four o'clock, illustrates the use of the most advanced form of light, portable, radio equipment. The reception is good enough to permit rebroadcast over the public address system set up on Tech Field.

This public address system will be used to broadcast the Technique Rush. It will also be used to broadcast the carrier pigeon messages. To illustrate the speed of the carrier pigeons, visitors will be permitted to write messages which will be placed in a small capsule on the leg of the pigeon, which will then be released. As soon as the pigeon reaches the home loft, the message will be sent back by telephone and broadcast over the public address system.

The Signal Corps Unit will also hold a radio-installation race at 4:45 o'clock. Two competing teams of Signal Corps students will set up portable radio transmitters. The first team to complete installation and report by radio to the judges' set will be the winner.

In addition to the outdoor exhibition, there will be a continuous display of military equipment in Room 3-305.

The program is being sponsored by the Technology chapter of Pi Tau Pi Sigma, national honorary Signal Corps fraternity, with the co-operation of the other members of the Signal Corps Unit.

R. O. T. C. Freshmen Will Act as Guides

At strategic positions around the Institute halls, freshman guides in military uniforms, will be stationed today in order to direct the Institute's guests to points of interest. The guides will distribute programs and offer helpful directions in an effort to make the guests feel welcome and "at home."

For those uninitiated to the simplicities of the floor plan, the process of weaving one's way from the basement of Building 6 to the third floor of Building 5 is not easy. But with the help of the liveried freshmen, the task should be simplified.

Students Present Schools Record In Laboratories

Pigeons and Atom Destroyers Are Included in List Exhibitions

OPEN HOUSE ALSO SHOWS ARCHITECTURAL DESIGNS

Opening its doors to the general public for the eleventh time in its history, Technology will hold Open House today from 2.00 P.M. until 10, under the auspices of the Combined Professional Societies.

Exhibits ranging from \$25 traps for catching mice to a model of a generator which may with its 10,000,000 volts smash the atom will engage the attention of the spectators today. The latest in streamlined trains, homing pigeons, and other items of scientific or Technological interest will greet the guests.

Examples of the cultural side of the Institute will also be presented. Three one-act plays prepared by students in the Sophomore classes in the drama will be given this afternoon in Room 2-190.

Painting of a mural from a living model will be conducted during the day by a student in the course in architecture.

All the material achievement of Technology since its founding almost seventy-five years ago, will be paraded before public view. Established in 1861, Technology opened four years later with fifteen students. Today the enrollment numbers more than twenty-five hundred.

First classes were held in the Rogers Building on Boylston Street, where the Architectural Department is now housed. In 1916 the Institute moved across the Charles to its present site.

In March 1930 the present president, Dr. Karl T. Compton was elected to take the place of the retiring president, Dr. Stratton.

FREE RADIO TUBES ARE GIVEN AWAY

All Steps in Manufacture Will Be Shown in Detail

Radio tubes, manufactured before the eyes of the visitors, will be given to members of the audience after completion. These tubes, however, will not fit the average radio receiver since they are experimental types built for special apparatus only. The entire apparatus for the tube manufacture will be open so that each step may be seen plainly. One tube will be made every fifteen minutes.

Machine Will Test Breath

In the same room, a machine will test your breath, by ringing a bell. Another booth will show that a woman's beauty is only skin deep. At still another, the Institute's electrical students go the penny arcades one better by having a free peep-show.

PHOTOGRAPHS SHOW FUEL COMBUSTION IN GASOLINE ENGINE

Automobile "Knock" May Be Seen as Well as Heard With Glass Cylinders

That annoying "knock" in your automobile engine can now be seen as well as heard. Engineers will demonstrate today for the first time that photographs can be taken to show exactly how the fuel is ignited and burned inside the cylinders of an automobile engine while it is operating at full speed. This remarkable demonstration is to be shown in the Auto Laboratory in Building 31.

Cylinders with glass walls photographed by an ultra-high speed motion picture camera are the means whereby the trick is accomplished. The windows have been fitted into the cylinder walls of an automobile engine while the high speed stroboscopic camera, capable of taking as many as sixty thousand photographs per minute is set up outside. The glass windows are constructed of special glass and are capable of withstanding the enormous pressures developed within the cylinder.

Photographs of the flame produced by the burning of the gas in the cylinder have shown conclusively that the knock in an automobile engine is caused by the vibration of the flame itself, which produces a sound wave which in turn causes the cylinder walls to vibrate. It is the vibration of these walls which produces the so-called "knock."

STEAM LOCOMOTIVE SHOWN HERE TODAY

Visitors will be allowed to pull levers, toot the whistle, and poke around the "innards" of the most modern type of steam locomotive, today from one o'clock to seven. The locomotive will be on exhibit on a siding of the Boston and Albany Railroad, near Vassar Street.

The locomotive will have its regular crew of engineer and fireman, as well as an expert from the railroad who will explain the workings of the engine. Steam will be maintained the entire time the locomotive is on exhibit. There will be a stairway leading up to the cab for the use of visitors, who will be allowed to manipulate most of the controls within.

WELCOME

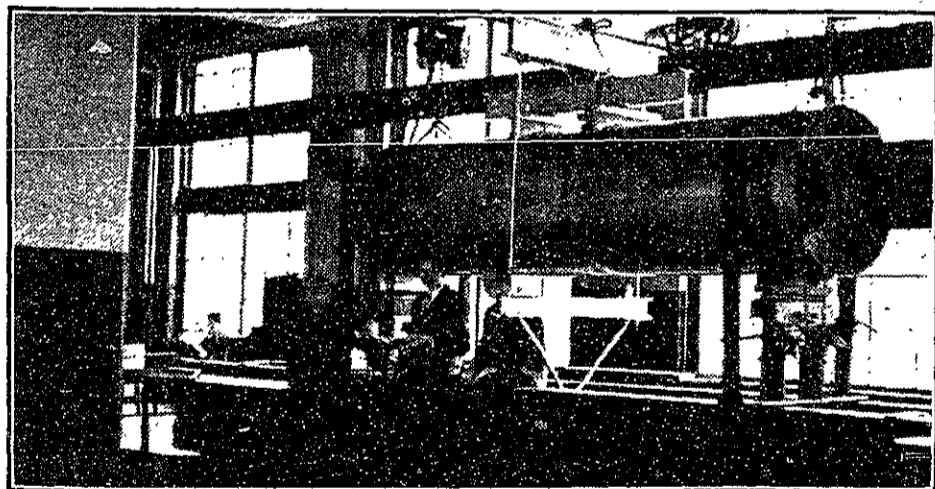
Today is the occasion upon which the Massachusetts Institute of Technology opens its doors and acts as host to the many persons who, for one reason or another are fascinated by the events and demonstrations which characterize Open House.

On Open House day all the manifold phases of Technology life are presented in a swiftly moving panorama. Here you will see a crew race. There you will find a drama in progress. In numerous laboratories are students going about the everyday routine of breaking hawsers, pouring molten metal, testing dynamos. On this table rests a device which has been erected for the occasion, with a student demonstrating its operation and uses. And finally, behind doors ordinarily closed, one may see the apparatus and meet the men who play great parts in the development of science and engineering. From lightness and gaiety to seriousness and study, every shading may be found.

Through the Institute Committee, the governing body of the undergraduates, Technology's students extend to you their warmest welcome. The faculty, too, wishes to provide you with the most enjoyable time possible. Every effort has been made to insure that you will spend your hours in a way which will not only be pleasant and interesting, but educational as well. You are our guest and we hope you will enjoy our hospitality.

HENRY B. BACKENSTOSS,
Chairman, Open House Committee.

Tests on Four Hundred Pound Beam Aids Manufacture of Airplanes



TWELVE FOOT DURALUMINUM CYLINDER CRUSHED UNDER SEVEN-TON PRESSURE

Fifteen Thousand Pound Pressure Will Be Applied to Cylinder

Fifteen thousand pounds per square inch is the pressure which will be applied to the twelve foot duraluminum cylinder in tests to be conducted in the Testing Materials Laboratory, Room 1-210.

The cylinder is so designed that the results of the tests can be applied directly to the problems of fuselage construction in airplane design. These tests are being conducted by Walter H. Gale, Resident Assistant in the Aeronautical Engineering Department.

Duraluminum is an alloy of aluminum used extensively in airplane construction because of its lightness. It has about one-third the weight of steel. The cylinder on display, weigh-

ing four hundred and ten pounds and measuring three and one-half feet in diameter, is supported at each end. Pressure from the testing machine is applied at two points near the center so as to obtain pure flexure with no shearing forces.

Stress Measurements to Be Taken While the pressure is being applied, experimenters measure the distribution of stress and the distortion of the cross section. Finally, the measurements just before the cylinder gives way are taken to compute the allowable compressive stress.

The present cylinder is the third one to be so tested at the Institute. Last year at Open House one was examined and destroyed. During the present year a second has been tested. The findings of these experiments have already been used by various airplane concerns in the manufacture of their products.

Sound Sent by Beam of Light

E. E. Exhibit Compares Energy Used by Household Appliances

Comparison of electrical energy by consumed household appliances such as electric irons and toasters will be one of the main features of the Electrical Engineering Exhibit today in Room 3-003.

In a display, an improvement on a similar one last year, will demonstrate the transportation of sound by a light beam. Sound will be converted to a light beam and carried thirty feet across a room where it will be converted back to sound. A pendulum-like device will interrupt the light ray at intervals to prove that the sound is actually carried by the light.

There will be shown high speed movies.

Movies, taken by a high speed camera developed by Professor Harold E. Edgerton and Kenneth J. Germanhausen, will be shown in the same exhibit. Exposures for their high speed pictures were made possible by an intermittent light. Mercury arc tubes must be used for this because an electric light cannot be made bright enough. The film speeds by the lens aperture at about 200 miles an hour.

Pictures showing the flattening of a golf ball, when it is struck, the splash of a drop of water, and similar operations will be projected.

To illustrate methods of illumination, models have been constructed of a swimming pool and a library.

The differential analyzer, often called a "thinking machine," will be in operation and students in charge will willingly explain its operation to visitors.

In the dynamo laboratory will be a collection of early dynamos and generators to demonstrate improvements in construction that have been made.



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GOING ALADDIN ONE BETTER

WELCOME TO OPEN HOUSE

ON THE occasion of Technology's Eleventh Annual Open House, this paper again welcomes the many visitors who throng here to examine a group of exhibits the general public rarely has the opportunity to see.

For this one day, the Institute is turned over to the students who show to their parents, their friends, and all who care to attend, "those features of the Institute of which we are especially proud and which are of particular importance in representing some of our more important recent developments." All these exhibitions illustrating the progress and vitality, the range and power, of scientific knowledge are arranged, operated and managed by members of the undergraduate body.

It has required weeks of preparation by individuals and by the Combined Professional Societies, the organization responsible for open house, to prepare the buildings for the thousands of people who are wandering through the halls today. "The conduct and arrangement of Open House by our Combined Professional Societies," says President Compton, "is indicative of the manner in which our students conduct their undergraduate affairs."

May we ask all who read this to consider not only the engineers and scientists responsible for the principles on which the various exhibits operate, but also the young men who have gone to considerable toil and trouble in order to create this modern Aladdin's Cave.

And please note that the Genie of the Lamp had nothing on us.

THE INSIDER'S VIEW

OPEN HOUSE

ESPECIALLY appreciative of Open House are the students at Technology and the members of the faculty. Although the success of the event depends almost solely upon their work, they feel that they are well rewarded for their efforts.

In the first place it gives them an opportunity to examine at first hand those recent advances in sciences other than their own which they have read about in the journals but have not seen. The fact that all the apparatus is in operation and attended by the people who know most about it, allows the student or instructor to get the very newest and most accurate information. Such an event permits the answering in one day of questions that have been gathering in the brain of a busy scientist or engineer for months.

In the second place Open House brings out those new developments that may have been missed by a man intent on his own work. The whole picture is gathered into a comprehensive form that finds ready appreciation.

Another is that it permits the men to show their friends and colleagues what they have been doing in their own fields. The folks back home or associates in other branches of learning are interested in the work of the people who are close to them. The chance to show them is a rare one indeed.

Again, men in two seemingly unrelated fields often get their heads together over an exhibition and discover that there could easily be a very profitable tie between their different lines. The biologist finds a chance to use a new discovery in electro-magnetic radiation; the mechanical engineer finds a way to use the latest development in chemistry; and so it goes.

Finally, it provides the scientist and engineer a method of appraising public apprecia-

tion or knowledge of their work. It satisfies a curiosity that could not be satiated in any other way—by direct observation.

"TIS PASSING STRANGE"

LIMITATIONS OF SCIENCE

ON THE theory that it is fun to be fooled, many of today's exhibits have been designed to appear magical in order to puzzle the visitor and give him the impression that the brands of science and engineering dispensed here are of the kind that can perform miracles. Lest the visitor leave with this idea, it might be wise to disillusion him and assure him that neither at Technology nor elsewhere has scientific research been able to develop anything which violates the laws of nature.

Indeed, each exhibit and demonstration which amuses so well by its apparent contradiction of common sense is so dependent upon fixed scientific laws that if the conditions under which these laws can operate were not exactly right there would be no miraculous effect and thus no reason for an exhibit. The visitor should realize that behind each entertaining "side-show" event there is a great deal of difficult mathematics and physics which it has taken centuries to develop and which one must study for years even to understand. All experiment and all engineering effort are firmly built on this much less spectacular theoretical foundation.

However, science itself has recently reached the stage where it is convinced that miracles are possible and that the laws of nature are not as rigid as formerly supposed. In none other than the "Physical Review," a journal for which only the elite among scientists can write, there recently appeared an article which proved mathematically that miracles can happen and that we really know nothing yet about the fundamental laws of nature. In fact, we cannot tell yet whether there really are any laws of nature. It is just as likely that everything is governed by pure chance.

Nevertheless we hope that while our visitors get an appreciation of the possibilities and numerous applications of scientific progress, they also should realize the limitations of science at our present stage of knowledge, for there are still a great many things that science is unable to do. Yet we recommend that none of our guests trouble themselves with such philosophical problems as these, but that they all enjoy themselves to the full extent that the students who have prepared the show would like them to.

ONLY FOR THE ASKING

FRESHMAN GUIDES

THE corridors of the building are long and endowed with many twists, turns, and convolutions a bit confusing to the average visitor. The exhibits are highly technical and mystifying to the laymen, and we add, to many of the Institute undergraduates who take this opportunity to examine rarely seen parts of Technology. For these reasons the Open House Committee has provided a large number of guides, recruited mainly from students of the freshman class.

Although instructed to offer every help to the parents, schoolboys, and visitors to the Institute they have as little experience in guiding as the visitors have in inspecting highly technical apparatus. Although willing and eager to help they may, in some cases be backward in coming forward unless specifically asked.

It has been impressed on the guides that they should offer aid whenever they see a visitor looking puzzled or worried. And it should be understood by the visitors that any assistance possible can be had only for the asking.

FORGETTING THE OBVIOUS

VOCATIONAL GUIDANCE

A COMMON failing of the human animal is to overlook the obvious, or having looked at it, to fail to realize its significance. One of the obvious features of the educational system at the Institute is the great opportunity for vocational guidance open to every undergraduate. The statement that the "greatest value to be derived from a college education is the contacts" has become an aphorism and in the process has lost some of its significance. It is, nevertheless, a primary idea the complete recognition of which would serve to enhance the student's chances for success after graduation.

The faculty and the instructing staff stand ready to give more than the scheduled lectures and recitations. They are willing to do more than correct problem papers. They are willing to give their spare time in helping the student discover his aptitudes and desires. They are willing to offer constructive advice to the man who is definitely perplexed by the problem of finding worth-while and congenial work for which he is fitted. Having had wide experience in the professional as well as in the educational world, they are in a position to judge abilities.

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Introduction

For the benefit of the visitor and those students who have only been here four years, and consequently haven't yet found time to read THE TECH, this column is the free expression of an individual, supposedly anonymous. As an institution it is unique among Technology publications.

The individual who is responsible for it has carte blanche. He may attempt to be funny, philosophical, reformative, reflective, politic, or anything else his capricious whims may dictate, and no word will be said, official or otherwise, so long as he does not contravene the dictates of good taste.

In general he usually sticks to the humorous, since the undergraduate body leaves political bargainings to the less intelligent, is too busy for reforms, Technology is not conducive to fine reflections, and the atmosphere does not encourage those finely intricate maanderings which are designated as metaphysics.

The Theoretical Physicist

Perhaps the most rarified and delicate of all the odd ones to be seen within these grey colonnades, are the theoretical physicists. A theoretical physicist is a man who figures out what things are like, electrons universes and things and then spends the rest of his time trying to persuade the experimental physicist (a man who knows what's wrong with the doorbell, but can't fix it) to do experiments which will check with his answers.

And Their Language

To continue from another beginning, these same above have developed to the point where they talk a language all by themselves. In fact they have been worrying for the past month about a certain "A" and a certain "B" which have something to do with electrons and tungsten wire. At least those few words we understood.

However, we can say no more as to the ultimate and mystical meaning of this strange discourse, since the only mathematical "A" and "B" which we ever understood at all, was the Mr. A who bought the pigs from Mr. B at \$2.73 a head, away back in eighth grade arithmetic.

The Engineer, Looking Forward

One, particularly one in our position with graduation just around Hoover's corner, is sometimes inclined to wonder What it All Means, and What Will Become of Us, Afterwards.

The engineer is in a ticklish spot. This comes about as the result of his peculiar temperament. In general he is too stupid or too honest to be a politician or a Big Business Man, he lacks the spark of motivating beauty which makes the artist, the poet, or the writer, he dislikes the contemplation and engendering of human unhappiness sufficiently to make him a bad reporter, and he cannot find a faculty for the repetitive coordination which makes a good motorman.

Such introspective contemplation of our deficiencies makes us feel very disgusting. Heck, guess we'll have to go out and build a bridge or something.

Lydia Lee--Luncheon

Opposite Aeronautical Laboratory
3-Course Luncheons—35c-45c-50c
Special Steak Dinner—60c

OPEN TODAY
7:00 A.M. to 7:00 P.M.



"Dance Lovers' Paradise"
THE SHERATON ROOM
COPLEY-PLAZA HOTEL

Music by the Famous
Meyer Davis' Le Paradis Band
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Tea Dances

Wednesday and Saturday
Afternoon, 4:30 to 7:00

Supper Dances

every night except Sunday

The superbly modern

Copley-Plaza

Merry-Go-Round

has made COCKTAIL TIME one
of life's smartest ceremonies.

Brother Alpha



We had a visit today from Rob Rockinrib, president of Rockinrib Umbrellas, Inc. Readers of the Technology Review will remember with pleasure his recent article on "Crowning the Unconscious Consumer." Rob says where he got his real start was reading

about this time this President Robinson of City College fought his way through this crowd of Pacifists with this umbrella. Right then, Rob says, he saw the chance to market an umbrella for present use. It was a delicate problem of design, because he wanted something that would fly to pieces under a system of strains just insufficient to break the skin on the human skull. He has now developed a number called The Presidential, priced to retail at \$1.50, and another called the Vice-Presidential, to retail at \$75. These he uses as leaders for the rest of his line, the Big Executive, the Professorial, and the Janitorial.

Rob says it is wonderful how a big enterprise of this kind broadens out in unexpected ways. He is now trying to interest the Y. M. C. A. in a scheme to start an Evening University in every town of 5000 or more through the Middle West. He says recently an agency offered him a mob of guerillas which was used in one of these navy pictures with this Jack Oakie, but before he got to it they were snapped up. He says it was reported they were working as Communists with this D. A. R. in these Schoolhouse Outrages.

The Week in Walker

This Dr. Wilhelm His, his journal of war experiences has now taken on the English title "I Gained Dignity at the Front." Everybody should read it, because it is better to worry about the time when Evolution will bring the Bacteria into the place of God's Chosen People than to bother trying to explain how Hitler got there. Some of us naturally love bugs and germs, and have lured them in our labs. But never from the study of disease in war times, this is a fine, hopeful, human book. The war, says the Doctor, is the greatest of human experiences, not the greatest catastrophe. Its permanent lessons are the restoration of the mind, the slayer, care, and moving of masses of humanity under primitive conditions. For the private soldier it was not another job, but, considering the tenacity and endurance that he displayed, it does not seem as though the race were degenerating. This Winifred Holtby her *Mandala*. *Mandala* makes one wish they wouldn't write so many long, engaging books about Africa. It was better in the old days of living-tone and Stanley, when Our Artist just made drawings of naked Blacks and Pierce Lions so a person could just look at the pictures and get on about his business. This book you can't leave. It is a companion piece to Huxley his *Barney New World*. Whether you have time or not you have to read the talk of this Tall, the *Mandala* is a terrific one, because he talks as Charlie Chan would have talked if he had learned his English from Cook Film.

(Continued on Page 8)

JORDAN'S STORE for MEN

The place for smart Sports Suits

\$25

and more

Until you've looked them over you won't realize the possibilities in our sports suits for young men. At \$25 a good assortment, well-designed and soundly tailored. Others at \$29.50 and \$35; and at \$38.50 the famous sports suits of Charter House and Langrock.

Second Floor—Store for Men

How to Obtain Job Featured by T. E. N.

Students Told to Survey Self
Before Applying for
Employment

The expectancy with which we are awaiting the publication of Professor Pearson's biography of President MacLaurin is only accentuated by his recent contribution to the June number of T.E.N. which appears on the stands today.

Protective Coloring in Education or Displaced Modesty is the title of the article which is one among several in the issue of this month dealing with getting and holding a job. With a humble desire not to appear sippant we would like to say cautiously that here he is practising what for years he has preached.

Of course, what you really want to know is what he says. He gives sage advice. Because of that you will want to read it. If you ever intend to look for a job, read this article and discover what preliminary surveys of yourself to make.

June T.E.N. is replete, incidentally, with advice on getting and keeping a job. And what could be more pertinent when the field of opportunity is so limited, as daily reports seem to indicate. *Looking for a Job* by Ovid W. Esbach and *After Commencement* by John M. Nalle are two articles which deal with getting and holding a job respectively. Mr. Esbach is an official of the A.T. & T. Co. and Mr. Nalle, '20, is a placement officer at the Institute.

Professor Dean A. Fales of the Department of Mechanical Engineering writes on *The New Passenger Cars*. Even if you have not been able to drive anything but a 1929 model (the vintage year for cars) you will enjoy hearing the low down on the latest "streamlined" models.

Dipping into the Future by Professor F. Alexander Magoun reads like an early '80's drawing room looked. But even early '80's drawing rooms had their good points.

"It is no prophecy at all," says Mr. Magoun, "but merely the obvious application of Darwinian principles to predict the extinction of the homely girl as a result of selective breeding."

Dr. Wirt would be roused to cynical comment if he were to read some of the more drastic predictions of the professor. Now that the magazine has been awarded the Yale Cup, it is stretching certainty to predict just who its readers will be. All in all we are inclined to agree with Professor Magoun as you will when you read the article. Harsh though the words be, they are too true to find general acceptance. That is why we feel that they are, in the true sense, prophecies.

R. D. M., Jr.

Eradicate poverty by getting rid of the birth control of money. That's the thing that's being overlooked. —Father Coughlin.

How'm I doing boys?—Mae West, to spectators as she gets off witness stand.

Social control is vastly superior to laissez-faire. Laissez-faire is epitomized by Herbert Hoover; social control by President Roosevelt. —Dr. Faurence J. Karpf.

You certainly cannot get prices up by any monetary move unless you go so far that all confidence in the national currency would be shattered. —Prof. O. M. W. Sprague.

MIGHTY WAVES DASH IN HYDRAULICS LAB

Scale Models of Rivers, Dams,
and Canals Displayed

Mighty waves two inches high lash
a six inch sea wall, model anchors

bite into the depth of two foot tank, river waters splash and churn, in fact the whole universe of the River Hydraulics Laboratory in Building 21 resounds with the sound of rushing water.

A model of a "free Vortex" lays open the mysteries of a bath tub whirl pool. Coloring matter in place of the usual soap makes visible the

currents and eddies of the water.

A model of the Cape Cod Canal which was built to gather experimental data for the placing of a planned \$10,000 lock, is to be seen in operation. It is an exact replica even to the action of the tide.

A long wooden channel of running water extends the length of the building.

DIRECTORY OF EXHIBITS

AERONAUTICAL ENGINEERING
Wind Tunnel Tests, Building 33, basement.

Giders, in front of Building 33. Airplane design, 33-308. Meteorology Instruments, Building 33, fourth floor.

Rigging Laboratory, Building 33, third floor. Airplanes Engines, Building 31. Airplane Engine Parts, Building 33, third floor. Airplane Instruments, Building 33, basement.

ARCHITECTURE

Architectural Designs, Drawing and Modeling, City Planning, Construction and Building Equipment, Students Working at Free-hand Drawing and Modeling, Building 2, first floor.

BIOLOGY AND PUBLIC HEALTH

Biochemistry, 10-470. Industrial Mineralogy, 10-470. Zoology and Botany, 10-419. Health Education, 10-411. Physiology, 10-411. Sanitary Bacteriology, 10-475. Pathogenic Bacteriology, 10-475. Anatomy and Histology, 10-479.

BUILDING CONSTRUCTION

Museum of Materials and Products, 5-240. Masonry Research Laboratory, 4-033.

Exhibits of Student Work, 5-240. Senior Thesis Work, 1-235. Slides and Motion Pictures, 5-240, 2:00 to 6:00. Historic Home Models, 1-235.

BUSINESS AND ENGINEERING ADMINISTRATION

Tech Movies, 1-245. Murals and Pictorial Exhibits, 1-245. Lectures and Talks, 1-245.

CHEMISTRY AND CHEMICAL ENGINEERING

Lecture Demonstrations, 10-250; 3, 5, and 7. Chemiluminescence, Cold Light, 4-435.

Rubber Laboratory, 2-025. Special Apparatus, 4-445. Exhibit of Silicaware, 2-310 (corridor).

Sulphur Motion Pictures, 4-270; 3:30 and 8. Motion Pictures on Evolution of Fuel, 4-270; 4 and 8:30.

Chemical Engineering Experiments, 2-110. Petroleum Stills, 2-010. Special Demonstrations and Exhibits, 2-110 and 2-050.

Vacuum Distillation, 4-454. Organic Laboratory in Operation, 4-440.

Analytical Laboratory, Special Displays, 2-310. Freshmen at Work in Laboratory, 4-151, 161, 251, 261.

Movies of Breaking of Brass Strip, 2-080; every ¼ hour after 2:30. Graduate Inorganic Chemistry, 6-421.

CIVIL AND SANITARY ENGINEERING

Model Electric Railway, 1-345. Synthetic Earthquakes, Building 1, basement.

Model of 'Jungfrau', 1-345. Soil Mechanics Apparatus, 1-335. Surveying Exhibit, 1-345. Filtration Plant, 1-345. Structural Exhibit, 1-345.

Siphon Spillway, 3-150, 3 to 5 and 7 to 9. Cavitation Experiments, 3-150. Modern Steam Locomotive, B. & A. tracks behind Refrigeration Laboratory, Vassar street.

River Hydraulics Laboratory, Featuring Models of Sluice Gates, Dams, Spillway Construction,

Cape Cod Canal, River Shifting, Building 21; 3 to 5 and 7 to 9. Observations, 69 Massachusetts Avenue outside; 8 to 10. Model Earth Fill Dam, 1-335, 3 to 5 and 7 to 9. Seismology Laboratory, Building 1, basement.

DRAWING AND DESCRIPTIVE GEOMETRY

Work of Freshmen, Building 2.

ELECTRICAL ENGINEERING

Experiments in Electronics and Electrical Measurements, 10-160. Construction of Vacuum Tubes, 3-003, every 15 minutes. Experiments on Electrical Machines, 10-050.

Differential Analyzer, 10-338. High-speed Motion Pictures, 5-330; 2 to 9 on the hour. Electrical Students' Shop, 10-088. Historic Machines in Operation, 10-150.

Electrical Laboratory Substation, 10-050. Bar Photometer, 10-082. Integrating Sphere, 10-023.

Model of Institute Library, 10-271. Exhibit of Coöperative Course, 10-267.

Network Analyzer, 10-395. Models of Lamps, Swimming Pool, 10-271.

High Voltage Display, 10-395. Communications Exhibits, 10-385, 303.

Tesla Coil (See Chemistry Lectures), 10-250. Electrical Analogue of Conditioned Reflex, 10-303.

Electric Furnace Display, 4-007. Electroplating Exhibit, 4-105. Sound Laboratory, 4-317.

GEOLOGY

Museum, Miniature Oil Well and Geyser in Operation, Building 4, first floor.

ENGLISH

One-act Plays by English Students, 2-190; 2:30, 3:30 and 4:30.

MATHEMATICS

Charts, Models, Mathematical Machines, 2-170. Talks on Mathematical Puzzles, 2-170.

MECHANICAL ENGINEERING

Foundry, Metal Pouring, 35-250; 4 and 8. Pattern Making, 35-150; 4:15 and 8:15.

Forging Demonstrations and Drop-forging, 35-250; 4:30 and 8:30. Machine Tool Laboratory, 3-360. Refrigeration and Air Conditioning Laboratories, Building 46, Vassar St.

Textile Microscopy, 3-315. Stereograms and Carding, 3-321. Air Conditioning Equipment, 3-329.

Physical Tests on Textile Materials, 3-329. Tests of Concrete and Timber Columns and Ropes, 1-110; 4 to 5 and 8 to 10.

Cold Bend and Fatigue Testing, 1-310. Torsion, Tensile, and Spring Testing, 1-210, 3 to 5 and 7 to 9.

Photo-elasticity Demonstrations, 1-304. Fatigue Testing, 1-310. Engine Laboratory, In Use, 3-050, 150, 250.

Welding Laboratory, 3-359. Automotive Laboratory, Engine Design, Building 31.

MILITARY SCIENCE AND TACTICS

Ordnance Material, 1-223. Anti-Aircraft Guns, In Front of Hangar Gym; 2:30.

Coast Artillery Corps Equipment, 3-310A.

Engineer Corps Equipment, 3-307. Motion Pictures, Engineer Corps, 3-370; 2, 3:45, 5:30, 7:15 and 9.

Chemical Warfare Weapons and Appliances, 3-307. Military Signal Devices, 3-305.

Plane-ground Radio Communication, Signal Corps Pigeons, and Radio Race, Tech Field; 4.

MINING AND METALLURGY

Ceramics, Building 4, basement. Fire Assaying, 8-330. Stamp Mill, 8-230.

Glass Tube Experiment, 8-230. Blast Furnace, 8-010. Leaching Tank, 8-210. Heat Treatment, 8-410.

NAVAL ARCHITECTURE

Nautical Museum, 5-190. Naval Architecture Library, 5-115. Naval Architecture Drafting Room, 5-420.

Model Cutting Shop, 5-220. Student Thesis Work, 3-250.

PHYSICS

Glass Blowing Demonstration, 6-120. Exhibition of High-frequency, High-voltage Discharge, 10-250; 2, 4, 6 and 8.

Modern Electronics, 6-205; every half hour from 2 to 5 and 6:30 to 10.

Electrons and Light, 6-215, 217; 2 to 5 and 6:30 to 10. Student Lecture Demonstration, 10-275; every hour.

"Pepper's Ghost," 4-312. Spectroscopy Laboratory and Atomic Structure Research, Building 6, basement.

Model of Van de Graaff High-voltage Generator in operation, 4-370; Every half hour from 2 to 5 and 6 to 10.

Photoelectromagnetodynamic Trap (Mouse), 6-215. Modern Photographic Technique, 4-309.

UNDERGRADUATE ACTIVITIES

The Tech, Semi-weekly Newspaper, Exhibit of News Ticker and Other Publishing Apparatus, 4-138 and Walker Memorial, basement.

Voo Doo, Humorous Monthly Magazine, Walker Memorial, third floor.

Technique, Year book, Technique Rush, Tech Field; 3:00. Tech Engineering News, Professional Monthly Magazine, Walker Memorial, basement and 4-142.

Combined Musical Clubs Concert, Walker Memorial Gym, Third floor; 8:00.

Open House Tea Dance, Walker Memorial Gym; 3:30. Cleofan, Undergraduate Women's Organization, At Home to Women Visitors, 10-300. Other Ladies' Rest Rooms are: 1-265, 2-243, 3-301, 5-116, 8-216, and 10-383.

Athletics, Richards Cup Crew Race, Charles River; 2:15. Sports Review, Hangar Gymnasium; 2:00 and 7:00.

Gymnastics Exhibition, Walker Memorial Gymnasium, third floor; 6:30.

Debating Club, M. I. T., Freshmen, 2-190; 7:30.

INFIRMARY

A Doctor and a Nurse will be in attendance at the Homberg Infirmary, Building 11, first floor, throughout the day.

Room numbers are divided into two parts. The part before the hyphen refers to the building number, while the last three figures, after the hyphen, designate the number of the room in that building. The first of these latter three digits refers to the floor. Odd numbered buildings are on the west side of the Great Court, while those with even numbers are on the east side. When in doubt, ASK A UNIFORMED GUIDE.

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JUNGFRAU MOUNTAIN IS SHOWN IN MODEL

Switzerland's famous mountain, the Jungfrau, will be shown in a scale model in Room 1-345 today. The model is part of the Civil Engineering Department exhibit. About three feet square at its base, the model shows the peak of the Jungfrau, and extends down to several of the valleys below. It is made out of papier-mâché, which is painted to show realistically the rock and snow of the mountain.

The First Church of Christ, Scientist

Sunday Services 10:45 a.m. and 7:30 p.m.
Sunday school, 10:45 a.m.; Wednesday evening meeting, 7:30 p.m.; in the church edifice, Norway, Fal-mouth and St. Paul Streets. The church is open to visitors Wednesday and Friday from 10 a.m. until 6 p.m.
Reading Rooms—Free to the Public, 209 WASHINGTON ST., opp. State St., STATLER OFFICE BLDG., PARK SQ., 80 NORWAY ST., cor. Mass. Ave.
Authorized and approved literature on Christian Science may be read, borrowed or purchased.

Freshman Debaters Present Discussion On N.R.A. Features

Special Exhibition Is Planned
for Open House Visitors
and Students

BOTH TEAMS UNDEFEATED

A debate on the subject: "Resolved, that the essential features of the NRA should be embodied as a permanent part of the United States Government" will be presented today in Room 2-190 from 7:30 to 8:30 P.M. by the two undefeated freshman teams of the M.I.T. Debating Society. This is to be a special exhibition for the entertainment of Open House visitors and interested students.

Today's forensic exhibition was scheduled to take place between M.I.T. and Radcliffe College, but unforeseen circumstances prevented the carrying out of this intent.

The event will mark the close of a successful season for the new society which was organized last fall. Prior to that time, no interest in debating had been displayed at the Institute for a period of more than four years. In 1929, the Technology Debating Society, which had made championship grades with several of its teams, was disbanded because of an apparent lack of interest.

Freshman Re-organize Society
This year a group of freshmen, anxious to conduct open forum discussions on topics of current interest, and to engage in inter-collegiate debates, reorganized the defunct society. Under the present auspices, more than eight of these open forums have been held, while the teams, which were chosen from the members of the society, engaged in three debates with other colleges.

It is planned to continue the society next year and to send out regular varsity teams. At present there is no varsity team at Technology. The groups which are to participate in tonight's discussion have already represented the Society in inter-collegiate debates. This will be the first occasion, however, that they will oppose each other.

The affirmative team, comprising Paul W. Stevens, Robert E. Katz and Leonard A. Sedar, defeated both Boston University and Boston College in the two debates which they engaged in this year. The negative team, comprising Philip J. Scarito, Lawrence R. Steinhardt, and Joseph G. Bryan, met Harvard University in a non-decision debate last Saturday evening.

Room 2-190 is the same room in which the one-act plays are to be held.

HOUSE MODELS WILL BE SHOWN IN 1-235

Building Construction Course
Furnishes Exhibit

Illuminated models of a neolithic lake village, an Egyptian house, and an early Saxon Hall will be shown today in Room 1-235 as a special exhibit in conjunction with the Senior Thesis Exhibit of the Building Construction Department.

These models are being shown by the Technology Press in co-operation with Albert Farewell Bemis of the Bemis Products Company and are the first of a group of 12 models to be shown next summer at the World's Fair.

They illustrate the evolution of house construction as told in the first volume of "The Evolving House," a book written by Mr. Bemis, a former Technology student, in conjunction with Mr. Burchard.

The Technology Press has printed the first volume of the series and has started work on the second volume of the work by Mr. Bemis and Mr. Burchard.

UNDERGRADUATE NOTICE

Those freshmen competing for the Cabot Medal Awards should report immediately for their second examination at Mr. McCarthy's office, Walker 335.

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Convenient to Fraternity Men

Eighty Juniors as Guides Provided

Reception Committee Will Aid Freshman R. O. T. C. Guides

An added feature of Open House is a reception committee of eighty men, mostly juniors, who supplement the regular freshman guides. These men, who are well acquainted with the Institute, will be able to carry on in event the freshmen at any time are unable to furnish enough information to guests.

Three functions have been given to the committee: first that of placing one representative in the office of each department head to assist in receiving callers between four and five in the afternoon and eight and nine in the evening. The committee will receive, advise, and personally conduct a group of two hundred high school seniors around the Institute. The group will meet at room 10-200. The third function of the committee will be to conduct several booths placed at advantageous positions around the buildings. The main booth will be placed in the main lobby; others will be placed as follows: one at the entrance at 69 Massachusetts avenue, one at the entrance of building 5, one opposite the office of the head of the Mechanical Engineering Department in building 3, one at the corresponding door in building 4, one in building 6, and one at the door in building 2 leading to Walker Memorial. These booths will be operated by men who will supply information about anything which may in any way be connected with the Institute and the Open House exhibitions.

A few men on the committee will be stationed in building 33. Any extra men will be distributed around the Institute and will act as free lances, offering information and personally receiving and conducting guests to various points of interest. The committee will be distinguished from other students by wearing white carnations.

A Junior in the college of engineering at the University of Nebraska accumulates enough revenue repairing watches to put him through school.

Lydia Lee--Luncheon

Opposite Aeronautical Laboratory

3-Course Luncheons—35c-45c-50c
Special Steak Dinner—60c

OPEN TODAY
7:00 A.M. to 7:00 P.M.

MICROBES ARE TO BE VIEWED IN SPINACH

Iron in Spinach Doesn't Make It Right Food to Eat

Microbes,—the kinds that cause deadly diseases and also the kinds that are harmless, will be shown through microscopes at the exhibit of the Biology Department today on the fourth floor of Building Ten. Other microbes although harmless possess body pigments which color the culture in which they grow. By means of this property, different designs may be made by swabbing steril cultures with these germs and allowing the bacteria to develop and produce the colored effect.

Charts and diagrams revealing the effect of excess or deficiency of vitamins will demonstrate why emphasis has been placed on proper foods as an essential to good health.

Samples of refined chlorophyll, the green coloring substance in leaves will be shown together with artificial chlorophyll when different metals have been substituted for magnesium in the compound. All this is to demonstrate that iron in spinach is not what makes it good to eat.

Other exhibits include isolation of the molds which destroy cloth fibers, and research into coffee roasting and grinding. Microphotographs will be shown depicting the development of molds which completely encircle the fibers and destroy them.

NEW EXHIBITION IN WELDING LABORATORY

Entirely new in the list of Open House exhibitions is the demonstration of the various types of welding being given in the Welding Laboratory on the third floor of Building One.

The Laboratory is a new one in the Institute, having been established only this year. Among the several methods of welding being shown are the following: automatic torch, arc, flash and spot welding. A hand gas-cutting outfit is also on display.

The actual process of welding which hitherto could not be watched without special colored glasses, can now be witnessed by the public without protection of this type. The operations will be carried on behind a blue glass screen which, while allowing the procedure to be seen, will reduce the glare so that it will not dazzle the eyes.

Huron College, situated in London, Ontario, is probably the smallest college in existence today. It carries a total enrollment of 20 students and five faculty members.

Mr. James E. Ryan, Glassblower, at Work



Ships, Signs, and Dogs Made in Glass

James E. Ryan to Demonstrate Art of Glassblowing

With the aid of a hot flame, a stock of glass tubing, and one or two small tools, Mr. James E. Ryan, one of the country's most expert glassblowers, will demonstrate his art and skill to the public today from 2 to 10 o'clock in the Eastman Lecture Hall. His work and demonstration will consist of the manufacture of intricate glass ship models, neon signs, glass birds, dogs, deers, and even vacuum condensation pumps. Simple glass tubes, heated to various temperatures under the control of the skillful operator, develop queer bulges and humps. He skillfully draws and slowly yet steadily rotates and before the interested gaze of the spectators evolve into life-like animal shapes, geometrical figures, or complicated scientific apparatus. With remarkable rapidity pieces of stock, alike at first, become under his dextrous handling a ship model, an electric light bulb, or any such widely variant forms.

Mr. Ryan, while employed at his trade in which the ancients were proficient, has met some of the most famous scientists of the day. Among them may be named Langmuir, Steinmetz, Rutherford, Marconi, and Millikan. He constructed much of the ap-

MODEL GEYSER AND OIL GUSHER SHOWN

Geology Department Will Feature Field Cross-Section

Working models of a geyser and an oil gusher are the main objects of interest being shown in the exhibit of the Geology Department today on the third floor of Building Three.

A cross section of an oil field including the oil gusher built to scale and demonstrating exact operation is being demonstrated. Accuracy is being maintained even to the extent of having real oil spouting from the model.

Similarly, the model geyser shows precisely how a real geyser operates. This demonstration is to be accompanied by lectures and drawings presented by Professor Frederick K. Morris of the Geology Department.

In the Paleontology Laboratory in Room 4-365 is being shown an elaborate exhibit called the "Pageant of Life" representing the passage of life for a period of 550 million years. Three dozen lantern slides will be projected on a screen to supplement the pageant. Men will be on hand at all times to show the slides and to answer any questions that visitors wish to have answered.

A more practical demonstration will be presented in the Economics Laboratory, on the same floor, showing something about gold prospecting. Demonstrators will show how gold is obtained from rivers and streams by the panning process. Samples of gold, silver, and radium ores will be on display.

The Geology Museum, exhibiting all types of rock formation and crystalline structure, will be open all day.

paratus that Dr. Langmuir used in his experiments. Among other things, he was the first to make a high vacuum condenser pump. Mr. Ryan has been engaged in his craft for twenty-seven years during which, on several occasions, he worked for Dr. Irving Langmuir in the General Electric Research laboratories at Schenectady.

During the World War he was stationed in Washington as a member of the Chemical Warfare Service.

After several years at Leland Stanford University, Mr. Ryan came to the Institute in 1930 and since then he has supplied the Institute with all the varied and complicated glass apparatus used in its many intricate research projects.

Fifty-two per cent of the students graduated from Iowa State College at Ames, last quarter, have been placed in positions since graduation.

Three Wheel, Tear Drop Car Displayed

Dymaxion Exemplified Modern Trend in Streamlined Motor-Cars

The "Tear Drop" automobile, exemplifying the most nearly perfect streamline design yet attained in automobile body construction, is on exhibition at the Automobile Laboratory, Building 31, under the auspices of the Student division of the Society of Automotive Engineers. There are only two such machines in the world.

The car, which is shaped like a tear drop, resembling the fuselage of an airplane, has only three wheels, two in front and one in the rear. The motor, located in the rear, is of the ordinary V-8 type. The radiator is cooled by a ventilator system obtaining a draft from a scoop on the top surface of the auto.

Streamlining Cuts Down Wind Resistance

Because it is so perfectly streamlined, wind resistance has been tremendously reduced, and the vehicle has sped 102 miles per hour with comparative ease.

A novel feature of the device is a periscope, by means of which the driver can see behind the car.

Under the direction of Professor Dean Fales of the Mechanical Engineering Department, students yesterday made wind resistance tests with the machine.

Also on exhibition in the Auto Laboratory is a testing car, with which the Society of Automotive Engineers have been conducting extensive practical road tests, such as acceleration, rolling resistance, wind resistance, and steering torques. An attendant will explain the methods by which these tests have been made.

The theses of four students in the Automotive Engineering Course is also on exhibition at the Auto Laboratory. John A. Hrones, '34, and Walter Cut, '34, will show their new system of indicator cards, while Stanley W. Doroff, '34, and Kenneth F. Ryder, '34, have an apparatus to show the efficiency characteristics of Diesel Engines.

In Building 3, the S. A. E. has on exhibition several chassis of automobiles showing the various parts in section.

Fine arts Mass. Av. at Norway St.
NOW!
ALL RUSSIAN PROGRAM
"BROKEN SHOES"
New Russia's Latest Triumph
"TROIKA" Old Russia with Olga Chekova of the English Titles Moscow Art Theatre

CHAUNCY HALL SCHOOL

Founded 1828

One hundred and six years of accumulated experience in preparing students for higher educational institutions is available to Chauncy Hall students, the past thirty-eight years having been confined to specializing for the Massachusetts Institute of Technology.

Experience shows that failure on the part of students after entering the Institute is usually due to insufficient preparation rather than to the difficulty of the Institute courses.

Students who have successfully met Chauncy Hall requirements have no difficulty in carrying the Institute courses efficiently and creditably.

The thoroughness of the preparation given at this school is demonstrated by the fact that although the enrollment here is limited to one hundred and twenty-five students, over one hundred and thirty Chauncy Hall prepared students were in attendance at the Institute during the past year.

At Chauncy Hall students are trained in correct methods of study, accurate habits of observation, sound reasoning, and clarity and conciseness of expression. In addition to thorough preparation in the entrance requirements, special training is given in Mathematical and Scientific subjects beyond secondary school work, such as the efficient use of the slide rule, the art of report writing, the correct use of Laboratory instruments, the theory of error and precision of measurement.

Students planning to enter the Institute are advised to take an extra year of preparation at Chauncy Hall rather than to begin work handicapped by "Conditions" or by "Cram" courses taken during the summer.

If you desire the advantage of such training, write or telephone for an appointment.

FRANKLIN T. KURT,
Principal.

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THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

CAMBRIDGE

The Massachusetts Institute of Technology offers Courses in Engineering and Science, each of four years' duration, leading to the degree of Bachelor of Science in:

Aeronautical Engineering	Geology
Architectural Engineering	Industrial Biology
Biology and Public Health	Mathematics
Building Construction	Mechanical Engineering
Chemical Engineering	Metallurgy
Chemical Engineering Practice	Mining Engineering
Chemistry	Military Engineering
Civil Engineering	Naval Architecture and Marine Engineering
Electrical Engineering	Petroleum Production
Electrochemical Engineering	Physics
Engineering Administration	Sanitary and Municipal Engineering
General Engineering	Ship Operation
General Science	

The Course in Architecture and the Course in City Planning are of five years' duration, and lead to the degree of Bachelor in Architecture. Five-Year Cooperative Courses in Electrical Engineering and Railroad Operation leading to the degrees of Bachelor of Science and Master of Science are also offered.

Graduate Courses leading to the degrees of Master of Science, Master in Architecture, Doctor of Philosophy, Doctor of Science, and Doctor of Public Health are offered. The Courses leading to the degree of Master of Science include Cooperative Courses in Chemical Engineering Practice and Fuel and Gas Engineering.

The better high schools and other preparatory schools in the United States offer adequate preparation for the required entrance examinations given by the College Entrance Examination Board in June, or by the Institute in September.

Graduates of colleges or of scientific schools of collegiate grade, and in general all applicants presenting satisfactory certificates showing work done at another college corresponding approximately to at least one year's work at the Institute, are admitted to such advanced standing as is warranted by their previous training, and are given credit for our required subjects, including the entrance requirements so far as they have been satisfactorily completed.

The Summer Session, extending from June to September, includes most of the subjects given during the academic year, and in addition special courses for teachers.

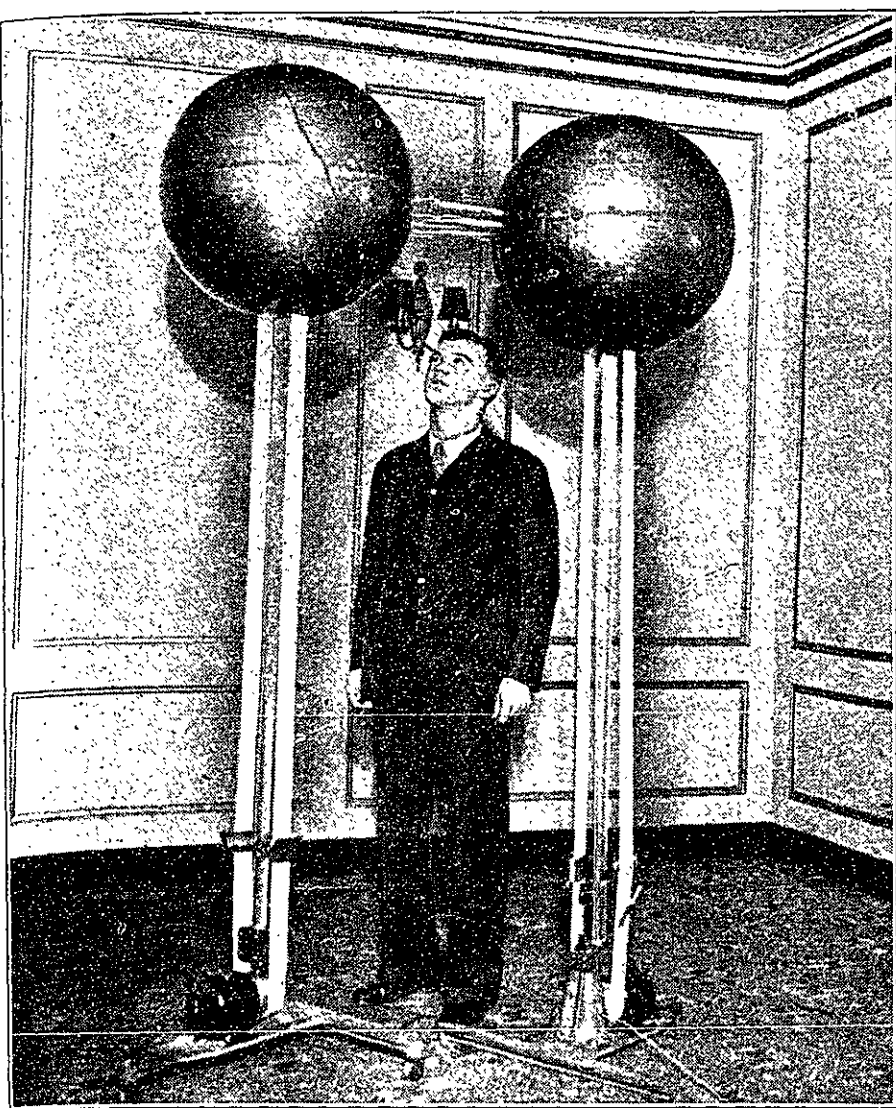
Any of the following publications will be sent free upon request:

Catalogue for the Academic Year (which includes the admission requirements).
Summer Session Catalogue.
Graduate Study and Research.

Correspondence Should Be Addressed To

THE MASSACHUSETTS
INSTITUTE OF TECHNOLOGY

Model of Van de Graaf Generator



Freshmen Give Novel Lectures

Chemiluminescence Emitted From Alkaline Solution Is Featured

Freshmen will present a novel series of lectures, comprising experiments on a chemical clock, a study of water, fire foam, chemical tests, chemicals and cloth, and chemiluminescence at 3.00-4.00, 5.00-6.00 and 7.00-8.00 in the main lecture hall, Room 10-250, today.

During each lecture Messrs. M. H. Nickerson and T. L. Hallenbeck will present the chemical clock whose principle is dependent on the diffusion of colorless liquids which become colored in a given length of time; Mr. R. Y. Jordan will talk on the electrolysis of water; Messrs. R. A. Peers and Cobb will display the use of fire foam, a mixture of aluminum sulphate, sodium carbonate, and licorice which possesses a fire extinguishing property; Mr. W. L. Hughes will demonstrate some chemical tests; and Messrs. A. C. Schroeder and G. C. Mott are to talk on and experiment on the dyeing and bleaching of textiles.

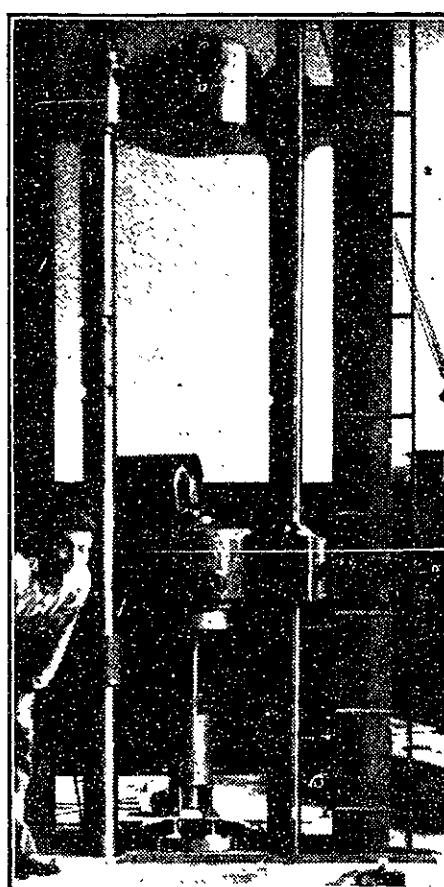
The special feature of the lectures will be chemiluminescence, or the production of "cold" light by means of chemical reaction at relatively low temperatures.

Dumping Loads of Electricity

The process of obtaining extremely high direct current voltages in this type of generator is similar to the old-fashioned method of raising water from a well by means of an endless chain of buckets, each dumping its load of water as it reached the pulley at the top. In this generator electrical charges are sprayed on paper tape at the base of the supporting cylinders and stored on the surface of the spheres where, when the potential reaches a certain height, the discharge takes place in a blue flash of light.

The large generator at Round Hill, capable of the highest direct current voltages ever attained, is expected to give physicists new data toward a more intimate knowledge of the electron.

Press Creates Force To Sheer Steel Bolt



hardness tests made, timber broken, and photo-elastic analyses taken, in the several divisions of the main laboratories located on the first, second and third floor of Building One.

Every ten or fifteen minutes, the attendants will subject different types of rope to tension in order to measure their tensile strength; they will explain the process to interested spectators. On the second floor, a lecture and demonstration on the testing of the hardness of metals such as brass, lead, tin, etc., is being given.

Photo-elasticity is a means of determining the stress in gears, beams, etc. by photographing the pieces when they are placed under stress, by means of polarized light. Such photos are being taken and finished proofs are on exhibition.

The BRADFORD presents . . .

THE COCKTAIL BAR, modern in tone, air conditioned for your comfort, where the best cocktails and liquors are served by experienced mixers.

THE GRILLE, a twin room to the Bar, for wining and dining at reasonable prices.

THE CASCADES, way up on the fifteenth floor, where Joe Rines' music and two floor shows entertain you nightly. Cover charge only on Saturdays and Holidays.

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SYMPHONY HALL BEGINS WED., MAY 2 TONIGHT AT 8:30 Every Night Except Sunday

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85 Symphony Players

Reserved Seats 50c, 75c & \$1 Admission 25c

FRESHMENTS—SMOKING Tickets 2 Weeks in Advance

VAN DE GRAAF MODEL IS DEMONSTRATED AT HALF HOUR INTERVALS

Copy of Machine at Round Hill Attempting to Break the Atom

A model of the huge 10,000,000 volt generator recently tested at Round Hill, Mass., will be operated in Room 4-370 at half hour intervals from 2 to 5 o'clock and 6 to 10 o'clock today, noisy sparks flashing from one sphere to the other or to the ground insulators at the base of the machine. Polished aluminum spheres three feet in diameter form the electrodes for electrical discharges from the 800,000 volts, static field producing "hair raising" experiences for close observers.

TIMBER BEAMS BREAK WHILE BEING TESTED

The Testing Materials Laboratory will be a beehive of activity during today's Open House. Rope will be broken, concrete columns destroyed.

Be popular, become a good dancer Uptown School of Modern Dancing Personal Direction Miss Shirley Hayes 330 Mass. Ave. Tel. Circle 9068 All Latest Steps, Fox Trot, Waltz, "400," etc. Beginners Guaranteed to Learn Here 15 Private Lessons \$5 Boston's Foremost School

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GRILL ROOM WAITRESS SERVICE

FACULTY DINING ROOM WAITRESS SERVICE

NORTH HALL WAITER SERVICE

TECHNOLOGY DINING HALLS

Walker Memorial Building

Seniors Favored In Richards Cup Crew Race Today

Class of '34 Is Expected to Repeat Wins of Past Two Years

CLOSE RACE IS SEEN

Each of the classes in the Institute is represented on the river today in the annual Richards Cup crew race. The race is being rowed over the mile course, with the finish in front of Walker Memorial. Because of an insufficient number of shells, all crews are rowing in lapstreak barges. Although only non-varsity men are eligible to row in this race, most of the men competing have had some experience. It is because of this fact that the race ought to be close.

From their appearance, the Senior boat is the favorite to win. Most of its members are former varsity candidates and it is being steered by a former varsity coxswain. The seating is: Bow, Jordan; 2, McKeever; 3, Moomaw; 4, Bromley; 5, Reiss; 6, Jerome; 7, Murdock; stroke, Murphy; and cox, Humphries.

Juniors Are Experienced

The Junior crew, being almost entirely composed of experienced men who have been rowing at the boat house for three years, is expected to make a good showing for itself. Incidentally, many of these men are considered as varsity material for next year. The boating is: Bow, Brookman; 2, Noyes; 3, Antonsen; 4, Dubbs; 5, Packard; 6, Lane; 7, Rucker; stroke, Creighton; and cox, Tome.

Representing the Sophomore class is an almost complete boat of veterans. Last year they were the first freshman 150-pound crew, but this year, due to lack of men they are just a crew. Although considerably outweighed by the Junior and Senior oarsmen, the Sophomores are expected to be up in front fighting for first place. Incidentally, most of the men in this boat rowed with the Field Day crew that beat the freshmen. The seating is: Bow, Smith; 2, King; 3, Jaeger; 4, Myers; 5, Beckwith; 6, Phillips; 7, Easton; stroke, Thomas; and cox, Hubbard.

The class of '37 is represented by the first lightweight crew. They won this right to represent their class by beating the second heavyweight freshman crew last Thursday. Since none of these men have had any real experience, too much should not be expected of them. The seating is: Bow, Brauer; 2, Bergen; 3, Rudy; 4, MacKay; 5, Wiggins; 6, Young; 7, Clifford; stroke, Crocker; and cox, Warburton.

INFIRMARY OPENS TO INSPECTION TODAY

X-rays and Statistical Charts Featured in Exhibit

The Infirmary will be open for inspection today from two till ten. This will include every unit of the department from the executive office to the hospital. Exhibits of special interest will be: X-rays of interesting cases, statistical charts of physical examinations of the students, statistical charts of work done during the year.

Laboratory exhibits will include the following: Growth of organisms on hair, charts of prevalence of "athlete's foot," cultures of organisms on media containing dyes, methods of growth of organisms without air, growth of organisms by the "Pulpit Method," method for studying the effect of air and gases on the growth of organisms, and microscopic slides of organisms commonly causing disease.

BOWDOIN DEFEATS GOLF TEAM

The varsity Golf team lost its third meet last Wednesday when it was defeated by the powerful Bowdoin college team, 5 to 1. Ozol was the only victor for Tech, winning his match 5-4. All the other matches were one sided, the accuracy and distance that the Maine team had being too much for the Engineers. The individual match results were: Mitchell (B) defeated Flood 4-3; Noyes (B) defeated Goodwin 4-3; Osol (T) defeated Woodruff 5-4; Kellogg (B) defeated Slosson 4 to 3. In the four ball matches Mitchell and Noyes (B) defeated Flood and Goodwin 6-5; Woodruff and Kellogg (B) defeated Ozol and Slosson 5-4.

These matches saw the return of Herb Goodwin to the starting tee, after being laid up with pneumonia, and also the absence of Ed Everett who is recuperating from a pulled tendon in his arm.

TRACK TEAM FACES WEST POINT CADETS IN FIRST DUAL MEET

Captain Bell, Mann, Johnson, Jenkins, Wrigley Are Outstanding

Technology's track team left yesterday to meet Army at West Point with high hopes and expectations of winning their first dual meet of the outdoor season today. The squad has trained vigorously all this week save Thursday when they were forced indoors because of the rain.

Richard Bell, captain of the team, is expected to win easily the 100 and 220 yard dashes. Bell is last year's I.C.A.A. indoor sprint champion and record holder. He also holds the Institute records in the 100 and 220 yard dashes and is the greatest sprinter ever to be at the Institute. Bell will be ably backed in the dashes by Al Greenlaw, Melvin Sousa and Tom Brown. Greenlaw showed himself as an all-around athlete when he starred in the Interclass Meet last fall. Sousa was a member of the indoor relay team. He will also run in the 440 yard run. Rees Schwarz and Dick Jarrell will comprise the remaining quarter milers. Jarrell is another former relay team man.

Jenkins Entered in Mile Run
Morton Jenkins, Tech's great miler and cross country star, should win the 880 yard and mile runs. Jenkins placed second in the mile run at the Greater Boston Intercollegiate last Saturday, and on a good track he can run the mile in 4.25. Johnny Barrett, captain of the 1932 cross country team and holder of the Institute freshman one-half mile record, and Dick Jarrell will run with Jenkins in the 880 yard run.

Bob Mann, captain of the 1933 cross country team, and John Talbot, present captain of the cross country team, will run in the 2 miles. Mann ran second to Playfair of Harvard at the Greater Boston Intercollegiate in the 2-mile run and is expected to win this race.

Stanley Johnson and King Crosby are entered in the high and low hurdles and the former will also enter in the broad jump, as will Walter Wrigley and Tom Brown. All are expected to place. Johnson is the son of the trainer, "Doc" Johnson; he placed second in the G.B.I. meet. Walter Wrigley, an Edison scholar placed third in the G.B.I. broad jump. Tom Brown placed fifth in the G.B.I. meet.

Several points are to be expected from the high jump men Warren Clapp and George Ray. Frank Lovering may place in the shot put. Harold Dixon, William Stark, and Gordon Donnan are all good for 12 feet in the pole vault. Dixon and Brown will also throw the javelin, while John Graham should place in the discus throw.

SPORTS COMMENT

With the news that games have been tentatively scheduled on the next two Saturdays for an unofficial Technology varsity baseball team, the indications are that interest in baseball at Tech is at a higher pitch than in past years. More men are playing on the class teams this season than last. The freshmen have been showing the way to the other classes in the matter of turnouts, with plenty of extra men showing up at the practices and the games. All the other managers have been successful in getting complete teams together for their contests. This means that between fifty and sixty men have been playing class baseball this spring.

Such interest in a sport which is not represented by a varsity aggregation is significant. The natural outgrowth of this interest is the formation of an unofficial varsity as announced above. Through the cooperation of Mr. Estes, one of the Institute's Math instructors, two games have been tentatively arranged for the outfit. Northeastern University has expressed its willingness to send a team here next Saturday to take on Tech. The only hitch in the arrangements at present is the rather poor condition of the Coop Field on which the game would be played. The infield is very rough, there being quite a few stones and pebbles scattered over its surface. In addition the backstop is extremely close to home plate. For these reasons attempts are now being made to schedule a game away from home for next Saturday in place of the Northeastern contest.

Boston University, when approached on the question of playing the Tech team on May 19, also was most willing to meet the Engineers. Accordingly present plans call for a game with the B. U. junior varsity at B. U. two weeks from today. To prepare for the coming games and to choose a team for the same a practice will be held tomorrow afternoon at 2:30 on the Coop Field. At the first practice session last Saturday there were about twenty candidates out. Despite the fact that tomorrow is Sunday good weather should bring a good turnout because quite a few of the outstanding players on the class teams were not out last Saturday and will probably show up tomorrow afternoon.

Two Teams Share Lead in Baseball

Seniors Remain Tied With Juniors as Thursday Game Is Rained Out

Although Thursday's heavy rain prevented the meeting of the Seniors and the Juniors, the two undefeated teams in the intramural baseball league, games were played Tuesday and Wednesday. On Tuesday the graduates fell before the Seniors, 10-5, and on the following day the Sophomores hit hard to outscore the freshmen, 12-5.

Bouchard, Kenny, Hanlon, and Stahl each got two safe hits to lead their team to its win over the freshmen. One of Hanlon's blows was a three-bagger which drove in two counts. Only five hits were made off Stoloff and Kenny, on the mound for the winners. These five bingles were evenly divided among five yearlings, Kendzur's being the only one to go for extra bases.

Seniors Keep Clean Slate
By winning Tuesday the Seniors maintained their undefeated record. Nason and Jameson, hurling for the Seniors kept the graduates well in control throughout the contest. Platt wielded the heaviest bat for the victors, connecting for a homer in his last time at bat after banging out a two-bagger in one of his previous appearances at the plate. Egan and Cosgrove, two of the Seniors' infielders, each got another pair of safe swats.

For the graduates Nudd and Estes each drove out two safeties. Campbell, the losing twirler, allowed nine hits but his support in the field was none too good.

At present the Seniors and Juniors remain in a tie for the top position in the league, the former having been victorious in two contests and the latter being credited with one more win.

Bush and Rogers Address Parents

Forty Students and Fathers Join in Discussion at Banquet

More than forty students at the Institute and their fathers attended the Father and Son Banquet held in North Hall of Walker Memorial last Saturday evening. The dinner was followed by speeches by Dr. Vannevar Bush and Professor Robert E. Rogers and singing led by William Weston, the glee club coach. The dinner was characterized by animated discussions. After the necessary introductions had been made, Gerald M. Golden, '35, newly elected president of the 5:15 Club introduced the speakers.

Professor Rogers mentioned the timeliness of the institution of the commuters' organization, saying that "for fifty years the commuters have been kicked around the Institute, living down in the locker rooms with the rats." He pointed out the difficulties which the graduating student now faces in contrast with the comparatively easier position of the young man of a generation ago. "You fathers have an opportunity to offer constructive help along the road which our fathers didn't necessarily have to give."

Although the failure of Mr. Roosevelt's heroic effort to rally American economic life would mean disaster for the world, there is not the slightest sign of any real attempt on the part of responsible leaders to cooperate with him or understand his methods. —H. G. Wells.

Extraction of Gold From Ore Is Shown

Mining and Metallurgical Labs Demonstrate Crushers and Extractors

The process of extracting gold from its ores will be shown to the countless visitors who visit the Mining and Metallurgical exhibits today. The complete process beginning with the crushing of the pieces of ore to the final reclamation of the mercury will be shown in Room 8-230.

The ore is first crushed by two stamps working side by side alternately. The crushed ore is then led over mercury with which the gold amalgamates. The amalgam is removed and the gold extracted. The ore which will be used, however, will not be actual gold ore, but pyrites which closely resemble it.

Movies showing the various processes connected with the production of petroleum will be operated in room 8-205 from 2 to 5 and from 7 to 10 o'clock. Prospecting, drilling, production, and consumption will be shown on the screen. There will also be an exhibit of drills, drill casings, and bits used in drilling in the same room.

Ceramics, which this year comes under Course III, will be a part of the Mining displays today. A brick machine which molds and presses clay bricks will be exhibited in 4-033 together with a kiln furnace and various ceramic pieces such as statuary and pottery.

In room 8-230 visitors will see a new exhibit, completed only two days ago. This is the electrolytic plating of copper. The tanks were built by students working under the F. E. R. A. and will be in operation for the first time.

Metallography will greet the public in room 8-430. This is the projection on a screen of enlarged microscopic views of metal surfaces. In past years it was customary to put microscopes out for visitors to look through. This arrangement was far from satisfactory, however, because only one person at a time could use the microscope. By throwing the enlargement on a screen, any number may view the images, eliminating all cumbersome manipulation of microscopes.

Students at Florida State College for women must take an examination on the college government. Those failing to pass the test are campused for two weeks. At the end of the punishment they must take another test before regaining their social privileges.

Co-eds at the University of Michigan answering to the name of Helen have formed a "Troy" club.

Four Technology Crews Entered in Compton Regatta

Coach Haines Optimistic as He Takes Boats Over Course in Trial Spins

LUCKE BACK IN LINEUP

With enthusiasm at the highest pitch, four crews left for Princeton Thursday night to prepare the Compton Cup Regatta being held today on Lake Carnegie. Final workouts were held yesterday afternoon and this morning as all four boats took trial spins over the course. Coach Bill Haines was very optimistic at the time and said the crews had made a great improvement and he had high hopes of today's race. The return of Charles Lucke to the lineup was the final touch to the coach's hopes.

At the same time Coach Whiteside of Harvard took his charges over the course. The Crimson boat is the only one in the race that is yet untried.

Princeton rowed to victory over the Midshipmen two weeks ago and is reported as having a powerful crew, while the Engineers trailed Yale last week, although the time they made over the Henley distance shows that the boat is by no means out of today's race. On the basis of its former performance, the Tiger oarsmen are favorites to repeat last year's victory and thus retain the cup they won last year.

Lightweights Out to Win
In the lightweight race, the Technology crew will be out to repeat last year's win over Princeton and at the same time redeem itself for the defeat at the hands of Yale last week. The crew which is the same that rowed together last year with the exception of one man, showed plenty of speed at the final practice. The Harvard 150 pound boat has not been entered in this race.

Boats from the three schools will be represented in the remaining two races, the junior varsity and the freshman. Princeton was the victor in both of these races in the last meeting and will try to repeat, although the untried Technology J. V.'s have been practicing hard during the past few weeks to win the race.

The Engineers that are expected to row today are as follows in the order of their seating: varsity, Haskins, Stueck, Newbegin, Wood, Loewenstein, Captain Westfall, Lucke, Mowatt and cox, Emery; junior varsity, Daley, Wilcox, Brooks, Whitmore, Briggs, Bixby, Olsen, Johnson and cox, Stein; 150's, Miller, Becker, Agnew, Burton, Rothen, Fassoulis, Priggen, Captain Haines and cox, Clarke; freshmen, Ferguson, Fay, Thorson, Newman, Hazeltine, Whitaker, O'Connor, Birch and cox, Hunt.

FRESHMAN NETMEN LOSE TO EXETER

Failing to register a single win, the freshman tennis team was badly defeated by Exeter Academy to the tune of 7-0. Although the score seems top heavy, the boys must be given credit for going down fighting. In fact some of the matches were such prolonged affairs that two of the doubles matches had to be called off because of lack of time. Wojtczak and Roper put up hard fights to win their matches but were unsuccessful. The other men who made the trip to Exeter were: Gay, Ceballos, Hosmer, Regnery and Salome.

A psychology professor, after a thorough investigation at Colgate, announced that chewing gum improves a student's pep about eight per cent.

Lydia Lee--Luncheon

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GLIDERS AND PLANES WILL BE DISPLAYED

Model Planes Are Displayed and Tested in Giant Wind Tunnel

Technology's celebrated wind tunnel is being put to use in the Aeronautical Engineering Department exhibit in Building 33 today. The Aeronautical Engineering Society's gliders are also placed outside the building for inspection.

A model airplane is placed in the wind tunnel, which measures five feet in diameter, and wind is sent through at the rate of 50 miles per hour. An electrically operated automatic weight adjuster, the only one of its kind in existence, measures the lift and drag on the plane. Many practical problems have been solved by the use of this tunnel.

On the second floor of the building is the Rigging Laboratory, in which a German-made, high performance soaring ship is being overhauled. Parts of airplanes are also to be seen in this laboratory.

The third floor is devoted to drawing and design. Included in its exhibition are: detail designs of airplanes, complete illustrations of preliminary airplane design, propeller design, engine design, and drawings showing the stress analysis of fuselages during flight.

Meteorology Has Weather Instruments

On exhibition in the Department of Meteorology in the same building, are instruments for the measurement of weather conditions. At the same time, several of the balloons used in the recent tests at St. Louis are being shown.

In the basement of the building is a "towing tank" in which models of airplanes are dragged through water and the flow of water observed.

SPORTS DESK

Open House visitors will have a chance to view some of the Technology sports today when various teams put on exhibitions in the Hangar and Walker Gyms. Although no varsity meets are scheduled to take place here, the boxers, wrestlers and gymnasts will show their wares, while the four class crews will compete for the Richard's Cup on the Charles River. The exhibitions in the Hangar Gym are scheduled to go on at 2 and 7 P.M., while the gymnasts will do their tricks at 6.30 in the Walker Gym. In the Richards' Cup race which starts at 2.15 P.M. the class of '35, winners for the past two years, will be out to make it three straight.

In the other sports events for the day, the four crews travel to Princeton to compete in the annual Compton Cup Regatta, the track team meets the cadets at West Point in their first dual meet, the lacrosse team stacks up against Union College, the varsity netmen seek their third straight win against Brown while the freshmen meet Worcester Academy and the golf team meets Holy Cross in Worcester.

HARVARD DEFEATS FROSH STICKMEN

The freshman lacrosse team lost its opening game against Harvard on Wednesday by the score of 10 to 7. The team made a good showing against its opponent from up the river despite the fact that very few freshmen have shown enough interest in the game to warrant its being continued as a first year activity in the future. New men are still welcome to come out for the team and should report to the Coop Field any afternoon to sign up for the sport.

Tennis Team Wins Second Straight

Providence College Netmen Fall Before Onslaught by Tune of 8-1

Technology's varsity tennis team won its second straight match of the season when it decisively defeated the Providence College team yesterday at the Coop Courts by the top heavy score of 8 to 1. The Rhode Islanders offered no competition whatsoever to the Engineers and as a result they won all their matches by two straight games. Gilbert Hunt playing a sizzling game, defeated his bewildered opponent 6-0, 6-0.

The other scores follow: Singles: Redhorst (T) defeated Gorman 6-1, 6-1; Eder (T) defeated Fitzgerald 6-1, 6-3; Ruckman (T) defeated Slattery 6-3, 6-0; Newman (T) defeated Anzer 6-0, 10-8; Hart (T) defeated Terry 6-4, 6-4. Doubles: Hunt and Redhorst (T) defeated Barret and Anzer 6-2, 6-3; Eder and Wood (T) defeated Fitzgerald and Gorman 7-5, 8-6; Gluck and Fenecher (T) defeated Slattery and Hart 6-4, 6-3.

MUSICAL CLUBS GIVE CONCLUDING CONCERT

This evening at 8.30 o'clock the Combined Musical Clubs will make its final appearance of the year with a concert featuring both the Glee Club and Orchestra. It will be held in the Gym on the third floor of Walker Memorial.

Last Friday the Clubs presented a varied program before the Lexington Teachers' Club in the Lexington Town Hall. This was the closing concert of the Banjo Club.

Letters from many sections of the country have been received by the clubs, commenting favorably on the reception and presentation of the broadcast on April 28. Letters, many of them from Technology Graduates, came from such places as Covington, Georgia; Newark, New Jersey; Santa Barbara, California; Corpus Christi, Texas; Madison, Wisconsin.

In this evening's concert, the Orchestra will play Merry Men of Windsor, by Nicolai; Hungarian Dance No. V, by Mascagni; Tales of Vienna Woods, by Strauss. The Glee Club will sing The Jolly Roger by Robertson; Autumn Sea by Gericke; Down Among the Dead Men by Vaughn-Williams.

Technique Rush Open House Day

Winner of First Paddle This Year Will Get \$10 in Addition to Book

Especially arranged as an entertainment feature for Open House Day this year, the Technique Rush, sponsored by *Technique*, the annual undergraduate yearbook of the Institute, will be held at 3 o'clock today on the athletic field.

Clambering over a small round hut completely covered with a liberal thickness of oil and grease, students will vie for the 10 paddles which are ejected at short intervals from a small hole in the roof of the structure. Competition is keen, as each of the coveted paddles entitles its possessor to a free copy of *Technique*, the 400-page yearbook, and many students have been known to leave the struggle with considerably less clothing than they wore on entering it.

Technique Rush has long been a feature of Technology's undergraduate activities, and this year's Rush promises even more thrills and excitement due to the fact that the ancient battered hut that has seen so many years of service has recently been rebuilt, making its roof an even more inaccessible and precarious spot.

Traditionally, the first paddle to be captured carries with it a certain amount of prestige and honor. Instead of coming through the hole in the roof of the hut, it has always appeared from some novel source which remains secret until the actual appearance.

FASTEST MODEL TRAIN IN COURSE I EXHIBIT

Civil Engineers Show Miniature Streamlined Engine

What promises to be one of the fastest model trains of its size ever exhibited as well as being a streamlined train, will be on display today as the central feature of a model railroad system complete with automatic and special equipment to the last detail. The railroad, which is part of the exhibit of the Civil Engineering department, will be on display all day today in Room 1-345.

The streamlined train, with its low center of weight, will hold the track at very high speeds although the tracks are not banked appreciably at the curves. This model was developed by Ellis Flink, '35, and embodies the feature of having only one truck or set of wheels at the junction of the two cars, instead of two as in most trains.

Automatic Equipment Used

The railroad system uses the latest types of automatic equipment to avert collisions between the different trains operating on the tracks at the same time. If two trains are approaching a crossing on different tracks, the one to reach the crossing first continues on while the other automatically stops until the first has passed by. Or if one train is too close behind another, it automatically stops until the other is a safe distance away.

In this manner the railroad system is a complete reproduction of a modern full-sized railroad. The track occupies a room about fifty feet long and twenty-five feet wide.

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Everything that science knows is used to make Chesterfield the cigarette that's milder... the cigarette that tastes better.

Chesterfield

the cigarette that's MILDER
the cigarette that TASTES BETTER

PROGRAM

(Continued from Page 1)

3:30 o'clock
Sulphur Motion Pictures, Room 4-270.
One Act Play, "Where the Cross Is Made," Room 2-190.
Operating Model of Van De Graaf Generator, Room 4-370.
Open House Tea Dance, Walker Memorial Gymnasium.
3:45 o'clock
Motion Pictures, Engineer Corps, Room 3-370.
4:00 o'clock
Student Lecture Demonstration in Physics, Room 10-275.
Motion Pictures on Evolution of Fuel, Room 4-270.
Movies of Breaking Brass Strip, Room 2-080.
High Speed Motion Pictures, Room 5-330.
Foundry Metal Pouring, Room 35-250.
Testing Materials, Room 1-110.
Exhibition of High Voltage Discharge, Room 10-250.
Operating Model of Van De Graaf Generator, Room 4-370.
4:15 o'clock
Pattern Making, Room 35-150.
4:30 o'clock
One Act Play, "Shall We Join the Ladies," Room 2-190.
Drop Forging, Room 35-250.
Operating Model of Van De Graaf Generator, Room 4-370.
4:45 o'clock
Movies of Breaking of Brass Strip, Room 2-080.
5:00 o'clock
Chemical Lecture and Tesla Coil Demonstrations, Room 10-250.
High Speed Motion Pictures, Room 5-330.
Student Lecture Demonstration in Physics, Room 10-275.
5:30 o'clock
Movies of Breaking of Brass Strip, Room 2-080.
Motion Pictures, Engineer Corps, Room 3-370.
6 o'clock
Building Construction Slides and Motion Pictures, Room 5-210.
High Speed Motion Pictures, Room 5-330.
High Voltage Discharge, Room 10-250.

Student Lecture Demonstration in Physics, Room 10-275.
Operating Model of Van De Graaf Generator, Room 4-370.
6:15 o'clock
Movies of Breaking of Brass Strip, Room 2-080.
6:30 o'clock
Electrons and Light, Room 6-215, until 9 o'clock.
Gymnastics Exhibition, Walker Memorial Gymnasium.
Operating Model of Van De Graaf Generator, Room 4-370.
7:00 o'clock
Chemical Lecture and Tesla Coil Demonstrations, Room 10-250.
Movies of Breaking of Brass Strip, Room 2-080.
Siphon Spillway, Room 3-150, until 9 o'clock.
River Hydraulic Models, Building 21, until 9 o'clock.
Model Earth Fill Dam, Room 1-335, until 9 o'clock.
High Speed Motion Pictures, Room 10-250.
Torsion, Tensile, and Spring Testing, Room 1-210, until 9 o'clock.
Student Lecture Demonstration in Physics, Room 10-275.
Sports Review, Hangar Gymnasium.
7:15 o'clock
Motion Pictures, Engineer Corps, Room 3-370.
7:30 o'clock
Operating Model of Van De Graaf Generator, Room 4-370.
Freshman Debate, Room 2-190.
7:45 o'clock
Movies of Breaking of Brass Strip, Room 2-080.
8:00 o'clock
Sulphur Motion Pictures, Room 4-270.
Star Observations, 69 Mass. Ave., outside, until 10 o'clock.
High Speed Motion Pictures, Room 5-330.
Foundry Metal Pouring, Room 35-250.
High Voltage Discharge, Room 10-250.
Student Lecture Demonstration in Physics, Room 10-275.
Combined Musical Clubs Presentation, Walker Memorial Gymnasium.
Operating Model of Van De Graaf Generator, Room 4-370.
8:15 o'clock
Pattern Making, Room 35-150.
8:30 o'clock
Motion Pictures on Evolution of Fuel, Room 4-270.
Movies of Breaking of Brass Strip, Room 2-080.

Drop Forging, Room 35-250.
Testing Materials, Room 1-110.
Operating Model of Van De Graaf Generator, Room 4-370.
9:00 o'clock
High Speed Motion Pictures, Room 5-330.
Motion Pictures, Engineer Corps, Room 3-370.
Student Lecture Demonstration in Physics, Room 10-275.
Operating Model of Van De Graaf Generator, Room 4-370.
9:15 o'clock
Movies of Breaking of Brass Strip, Room 2-080.
9:30 o'clock
Operating Model of Van De Graaf Generator, Room 4-370.

THE TECH TO SEND NEWS OVER TELETYPE

Two-way transmission of messages by means of a newspaper teletype machine is the contribution of THE TECH to Open House today. Visitors may submit messages in either Room 4-138, or in the News Room of the paper in the basement, Room 3, Walker Memorial.

Reporters stationed at strategic points about the Institute will bring "spot" news to be placed on a bulletin board outside of Room 4-138.

Loaned through the courtesy of Western Union, the teletype machine is an important necessity of every newspaper. It is the link between a daily situated in a particular section of the country and the rest of the world.

Bound volumes of issues of THE TECH, which was established in 1881, will be on display. THE TECH was first established by a group of undergraduates without assistance of any kind. It has always been an independent self-supporting newspaper.

An Editorial FORGETTING THE OBVIOUS

(Continued from Page 2)

This sounds like the affirmation of a condition that should exist in every educational institution. And yet if this fact were fully realized, the undergraduates would take advantage of it considerably more than they now do. The Technology student is as bewildered with the problem of discovering his aptitudes as the undergraduate of any other college. If he failed to discuss his problems with the men who are pre-eminently equipped to solve his problems, he is missing one of the really important and tangible advantages the Institute has to offer.

A youth's point of view can be no more matured than the experience which is the basis for the point of view. The business of education is, in a word, the process of fostering a matured outlook on life and its problems. The undergraduate who is alive to his environment can do no better than seek the advice of those whose training and experience enables them to help him.

BROTHER ALPHA

(Continued from Page 2)

The last word in satire of Imperialism and appreciation of the Primitive is the list of thirteen Anglo-Saxon tabus, circulated on the occasion of the Royal Wedding, for the use of the High Council of Nobles and Archbishops, so that they might not shock the visiting English.

"13. And most important. Remember that though the Europeans know you keep slaves and though they will be glad enough to take advantage of the comfort their service gives they never themselves refer to slavery? They will they be happy if you do so. Therefore Slaves Are Tabu."

This George Jean Nathan and Admirers, their American Spectator for May has a priceless transcript by this Thomas Beer of the conversation of five Yale Undergraduates on a smoking car rolling into New Haven. Now Brother Alpha and Some of Us may be entering else they say, but we are certainly Yale Men. We want to bear witness to the devastating accuracy of this transcript. "Who owns Connecticut?" says the current Nation. We should worry, so long as Yale is in it. The ashman, even, should get a tip for carrying it off.

Unfortunately we can't offer this Spectator in the Walker Memorial Library. It is a big flimsy thing. If you laugh, or snort, while reading it, you tear it all to pieces.

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Luckies are all-ways kind to your throat

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