Official
Undergraduate News Organ
of M. I. T.

The Tech
M.I.T. Established 1881

A Record of
Continuous News Service
For 50 Years

Volume LI—No. 30 CAMBRIDGE, MASS., SATURDAY, MAY 2, 1931 Complimentary

GREETINGS, VISITORS!

PRESIDENTS OF THREE CLASSES RE-ELECTED

Champlain, Gilman, McKay, Humphreys, Are Victorious

INSTALLATION OF NEW EXECUTIVES PLANNED MAY 7

Elections in Junior Class Are Won Only By Small Majorities

TO RE-ELECT BEAVER KEY

Three class presidents were re-elected and one vice-president became president as a result of the class elections held Wednesday. Harold P. Champlain was uncontested as permanent president of the Senior Class, Donald B. Gilman was re-elected president of the Class of 1932, Robert G. McKay was elected president of the Class of 1933 and Henry D. Humphreys was elected president of the Class of 1934.

Champlain is a resident of Newport, Rhode Island and prepared for the Institute at Rogers High School of that city. For two years he represented his class on the Institute Committee and in that capacity had served as Secretary of the Senior Ring Committee. During the past year he was chairman of the Institute Committee and President of the Senior Class. During his Junior year he served on the Junior Prom Committee. He is a member of Freshman Rules and Elections Committees, and he belongs to the Naval Architecture Society and the Square and Compass Club.

Gilman President This Year

Gilman, a resident of Quincy, Mass., received preparation for Technology at the Quincy High School. While in

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Textile Displays Contain New Types Fabrics, Machines

More Than Fifty Kinds of Fiber Being Shown in Building Three

Over fifty different types of fiber as used in textiles, together with numerous and varied forms of knit, woven, felted and punched fabrics, are being exhibited by the Textile Research Laboratory today. The last mentioned fabric is a webbing or back cloth punched through with needles, sheared, and pressed. It makes a remarkably good felt.

These fibers and fabrics are on display in Room 3-312. In another part of the same room textile optical apparatus is being presented for the public. Among the instruments in this place are binoculars, projectors, microtomes, photometers, and numerous slides of textile fibers and other materials.

Instruments for Research

All these instruments are used in textile research at the Institute. The microtomes are for sectioning fibers, while the microscopes are able to magnify them to 750 diameters. Photometers are employed to measure the gloss, or shine, of fabrics. This last type of research is very recent.

In Room 3-329 textile testing machines for fibers, yarns, and fabrics are now in operation. Automatic atmospheric control is necessary in this room, and this is accomplished by spray heads and a psychrostat. The former are to manufacture the humidity, while the latter controls the amount of moisture in the air.

Testing of single strands of rayon

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President's Welcome

I take this opportunity to welcome all visitors to the Massachusetts Institute of Technology on the occasion of our Ninth Annual Open House.

This annual exhibition makes it possible to illustrate in a striking manner the remarkable advances in science and engineering. I feel sure that the Combined Student Professional Societies, under the auspices of which Open House is held, have arranged an unusually interesting program.

Karl T. Compton

President.

New Stroboscope Displayed Today In E. E. Exhibit

Striking Effects Created By Unusual Electrical Apparatus

Ranging from the recently invented stroboscope to old electrical machinery and 10,000 volt discharges, the exhibition of the Electrical Engineering Department is one of the most spectacular of today's displays. Made as much as possible a student's affair, the exhibit, in the basement and first three floors of Building 10, will show the type of work undertaken by electrical engineering students as well as some of the extraordinary apparatus made possible by advances in the field of electricity.

In the Electrical Measurements Laboratory, on the first floor of Building 10, can be seen the Edison Bipolar Dynamo, designed by Edison about 1887 and later presented by him to the Institute. It is driving an old Thomson Houston Generator, supplying 110 volts and lighting a number of incandescent lamps. Nearby a Brush generator, designed in 1879, is supplying current for some arc lamps of ancient vintage. Students will be performing experiments here, as in the other laboratories, the entire duration of Open House.

Stroboscope Creates Striking Effects

Demonstrations of the stroboscope will feature the exhibits in the Dynamo Laboratory. A powerful source of intermittent light, a mercury arc rectifier with grid control, forms the most important unit of this new aid to science. Flashes of light, each with a duration of ten micro-seconds (ten one-millions of a second) make the poles of a generator revolving at 720 R.P.M. appear to stand still and produce other startling optical effects. Prince Takamatsu, on his recent visit

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Student Committee Has Charge of Open House

Following is a list of the members of the committee in charge of the various Open House Day activities. They have been in complete charge of all preparations for the occasion.

Chairman, Robert S. Backus '31.
Secretary-Treasurer, Frederick E. Brooks, Jr., '31.

Those in charge of the different sub-committees are as follows:

Program, Nelson B. Haskell '31.
Signs, Peter L. Loewe '31.
Posters, Frederick M. Moss '32.
Invitations, Robert M. Price '31.
Guides, John T. Kelton '32.
Ladies' Reception, Anita K. Sarabia '32.
Publicity, Ralph H. Davis '31.

Professional Societies Are Responsible for Open House

Miniature Railway Built By Course I Men Is Displayed

Exhibit, Including Automatic Signal Control, in Room 1-345 Open To All

On exhibit today as one of the features of Open House is a complete miniature railway system including many of the features of actual railroad operation, in Room 1-345. This miniature railway system was built by students in the course in railroad operation in the department of civil engineering, and will include passenger and freight trains hauled by electric and steam type locomotives.

2000 Feet of Wiring

The system includes approximately 200 feet of track of 2¼ inch gauge, and more than 2000 feet of wiring was necessary for the various signals controlling the movement of trains. One of the most spectacular operations of the system is the control of trains operating on tracks which cross. These miniature flyers are stopped by automatic train control devices, and when one train is on the crossing another cannot pass the danger signal in its miniature block. The tiny block signals on the system were designed and built by the students, and show red, green, and yellow in their various signal positions.

Highway crossings on this system are guarded by flashing danger signals and crossing gates that lower automatically when a train approaches. The rolling stock of this tiny railway system is the finest that can be found, and includes five trains, three of which will be in operation at one time with various types of passenger and freight cars.

EACH DEPARTMENT PLANS NOVELTIES TO AMUSE GUESTS

Military Science Students Act As Guides for Benefit Of Strangers

PORTRAY STUDENT LIFE

Technology will be the center of attraction today when thousands of guests from far and near attend the ninth Annual Open House. From 2 o'clock until 10 o'clock this evening the Institute buildings will be thronged with visitors interested in scientific education. For months plans have been made for this occasion, and when the doors are thrown open to the public today, Technology will be fully prepared to act the part of the proud and hospitable host.

Over 20,000 visitors are exected to take advantage of this opportunity to see the Institute laboratories and departments in action. Each department is putting on one or two exhibits and many mysterious, and, to the average person, miraculous experiments are being planned to entertain and educate the guests. It is the aim of those in charge of the affair to keep everyone interested and eager for more as they make their tour of the buildings.

Planned by Students

The entire arrangements of Open House have been planned and are being carried out by the Combined Professional Societies, the various exhibits and demonstrations being operated almost entirely by undergraduates. The purpose of the affair is

(Continued on Page Five)

Oarsmen Meet Harvard And Princeton on Charles Today

BOB TRIMBLE TO STROKE JAY VEES

Tigers Workout on Basin For First Time Yesterday In Preparation

Varsity, Junior Varsity, 150 pound Varsity, and freshmen crews of Princeton and M. I. T., and the Varsity, Jay Vee, and freshmen of Harvard will meet in the season's first major regatta on the Charles river courses this afternoon. The races are scheduled to start at 2 P. M. and, with the exception of the lightweights, all will be rowed over the mile and three-quarters course.

Preliminary time trials held Thursday evening over a rather rough course resulted in slightly higher times than those of the Basin records set last year. In these trials the Heavy Varsity, stroked by Richardson led the lighter crew by two lengths. This shell was followed at another two lengths by the heavy frosh boat.

Varsity Lineup Shifted

These results were probably the deciding factor as to which of the two crews should row Varsity and which would represent M. I. T. in the Jay Vee event. The heavy boat, which averages about 179 pounds, will be manned by the same oarsmen who took her across the line on the Severn last week but a number of shifts have been made within the lineup. In the lightweight, or Junior Varsity boat Bob Trimble will pull the stroke blade for his first race of the year. Trimble

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COMMITTEES CHOSEN FOR COMING SEASON

Re-Elections for Beaver Key Society Wednesday

Carroll L. Wilson '32 is the new Chairman of the Budget Committee and Robert G. Holt '33 is the newly appointed Junior member of the committee. The new selections for the Walker Memorial Committee are Joseph C. Noyes, Jr., '33, Fred H. Cooper '33, and Jack T. Turner '33, while the Ring Committee for next year will be composed of Edwin B. Powell, Jr. '32, and Herbert E. Grier '33. These appointments were announced Thursday evening at the meeting of the Institute Committee.

Reelections for the Beaver Key Society necessitated by the mistake in the spelling of the name of Fred H. Cooper '33, on the ballot, will be held on Wednesday, May 6. "The mistake," reported Charles R. Woods '31, chairman of the Elections Committee, "was not noticed until noon and the only fair means of rectifying the error would be to rerun the election."

Increase in Student Tax Asked

Because of the increase in tuition next year, and the serious lack of money for athletic supplies, it was passed that the Corporation be petitioned for a one dollar increase over the five dollars of last year. The case of the two names stricken off the Sophomore ballot was dropped till the next meeting of the Committee next Thursday at 5 o'clock in the West Lounge of Walker Memorial. The next meeting will be a joint meeting of the old members and those newly elected.

Faculty Open House Committee Dissolved at Its Only Meeting

ACTIVITIES IN WALKER FEATURE TEA DANCE

Beaver Key Society Entertains With Tea Dance in Gym

Beaver Key's last tea dance of the year in the Walker gym is the high light of the Open House activities held in Walker Memorial. The Techtonians in full strength will provide the music for the dance which lasts from 3:00 to 5:30 p. m. and is free to all those attending Open House. Mr. and Mrs. Wallace M. Ross and Mr. and Mrs. Pennell N. Aborn are the chaperones.

Visitors also have an opportunity to visit the offices of all activities and learn how the work is done. Representatives will be present at all times to answer any questions. The activities located in the basement are the Tech Christian Association, the Tech Engineering News, and the news room of THE TECH. The remaining offices are all on the third floor and include Technique, Voo Doo, the Technology Athletic Association, and the business office of THE TECH.

Pi Epsilon, Tech's honorary Journalistic Society, has an attractive display in the main lobby featuring a large sign upon which the Greek letters pi delta and epsilon are spelled out with the covers of the four publications represented by this fraternity. On a table in front of this is a display of the various steps involved in the making of an engraving. The four color process of color printing is illustrated by a series of proofs and the four different plates used. The form of today's issue of THE TECH is also on display.

SHOW CONFIDENCE IN STUDENT WORK

Faculty Members Unanimously Request President To Disband Group

Open House today is solely the result of the efforts and work of the undergraduates. Although a Faculty Committee was appointed by President Compton some time ago to assist the Combined Professional Societies in making plans for this important occasion, there has been no need for them to do so.

Decided evidence of the highly successful manner in which the students have gone about making the arrangements without the aid of the Faculty members was presented last Thursday afternoon. At that time the first and last meeting of the Committee appointed by the President took place, in conjunction with the Undergraduate Committee, in the office of the Chairman of the Corporation. The meeting was held for the purpose of making final plans for the occasion and reports were made by the undergraduates in charge of the various student committees for Open House.

Faculty Committee Dissolved

The faculty members were so satisfied with the reports of the arrangements as presented that it was unanimously moved, seconded and passed that a request be sent to the President that the Faculty Committee on Open House be dissolved and that the meeting be adjourned. The fact that previous to this time the Committee

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WELCOME

THROUGH the medium of this column, the members of the Corporation, the Faculty, and the student body extend welcome to the Institute's guests on the occasion of the ninth annual Open House Day. The exhibits, experiments, and investigations which form the greater part of today's exposition are representative of the services that Technology is performing for the scientific world. We feel that it is our duty as a school of higher learning to allow those who are not directly connected with the Institute to gain some appreciation of the wide field and magnitude of the scientific research which rises out of this intricate organization.

However, we would urge our visitors that while there is found at Technology no end of scientific subdivisions—mechanical, chemical, electrical, and all the rest—we of the undergraduate body are, after all, human beings. We would especially deplore that our guests go away with the idea that we are machines subjected day in and day out to such an atmosphere. Perhaps you will not understand all the mechanisms that you see during the day. Perhaps you will leave feeling that Technology stands for nothing more than applied science and research. We therefore direct your attention to the Walker Memorial Building. This, more than any other unit in the Institute plant, belongs to the student body. Here are housed all the undergraduate activities and the gymnasium; it is here that the student comes for recreation.

There is no getting around the fact that Technology is giving its greatest service to its student body. To us it is a source of knowledge, ability, and self-reliance. It is the other side of our undergraduate life that we wish to impress upon our guests. Undergraduate activities are an integral part of our daily existence. In our associations with other students for a common purpose not entirely related to the curriculum, we gain personality and character.

Open House is Technology's one opportunity to show the world at large its internal mechanisms. However, we ask that our guests not forget that we of the student body are essential parts of this whole scheme, and that it is our most earnest wish that you enjoy your visits here and go away fully appreciating the advantages that are ours alone, and fully aware of the factors which, though in no way related to steam laboratories or textile machinery, also contribute to our finer sensibilities.

AND IN ADDITION—

EVERY great occasion must have its "added attractions." This afternoon Technology will offer to its guests enough of these to satisfy even the most doleful of spectators.

The little wooden hut has been erected between Building 2 and Walker Memorial, has been repainted and regreased, and the stage is set to reenact that annual melee, Technique rush. This year, with the yearbook's new attractions, we may expect all the more grease to be smeared, more backs bared of any semblance of clothing, and more blood spilt in this crude petroleum roughhouse.

Later, Technology's crews will meet those from Princeton and Harvard on the Charles Basin. In view of its excellent showing last week at Annapolis, our boats should row their best this afternoon, and against such formidable opponents as to make the race as exciting as we have seen for some time.

The Beaver Key Society will hold a tea dance in the Walker Gymnasium from three until six, to which all visitors are cordially invited. This organization has in its year of existence shown itself to be as worthy as any undergraduate unit, and fully capable of carrying out its original purposes. During the year the society has given several dances after basketball games, the proceeds of which are used to finance the entertaining of athletic teams which come to the Institute from other schools.

Then, to finish off a perfect day, a band concert will be offered this evening in the Great Court. Our guests will find the Institute very much alive during Open House Day. We assure you that approached in the right mind, you will be not only instructed and educated, but also entertained and amused.

Great Pump in Hydraulics Laboratory Attracts Attention of Many Visitors

30-Inch Centrifugal Machine Has Capacity of 24,000 Gallons Per Minute

A great many Technology students, both new freshmen and others, as well as the large crowd of visitors who are visiting the Institute today have seen the huge pump in the hydraulics laboratory in Building 3 and perhaps speculation has been raised as to whether it is one of the largest in the world.

This object of so much interest, a centrifugal pump with a 30 inch suction and a 30 inch discharge, while not to be classed with those deserving the adjective "largest," delivers 24,000 gallons per minute while operating at a speed of 240 R. P. M.

The pump is driven by a 350 horsepower angle compound steam engine with a horizontal high pressure cylinder and a vertical low pressure cylinder.

Has Delivered 38,000 G. P. M.

The pump, while having a rated capacity of 24,000 gallons per minute, has under test actually delivered as much as 38,000 gallons per minute. All of this water is drawn from a canal ten feet deep located below the floor of Building 3 and supplying all the pumps. Because of the intensity of the suction developed below the intake pipe of the pump, it is necessary to place the lower end of the pipe about five feet below the surface so that air will not be drawn into the pump and spoil the suction.

Flow Measured

Upon leaving the pump, the water is shot through a Venturi Meter, where by measuring the velocity of the water and knowing the area of the tube, it is possible to determine the volume of water pumped. The water is then delivered to a large race-way on the third floor. As it flows down this raceway, five feet wide, five feet deep, and 135 feet long, the velocity of the water is gradually checked until it flows into the penstock which is a conical shaped tube with the wide part at the top.

Pouring down the penstock, the water is delivered to a concrete box in the basement where its progress is checked by an iron gate ten feet wide and ten feet deep. A grating weighing two tons and operated by a grid valve regulates the flow of water past this gate.

From here the water passes along a canal ten feet wide and 90 feet long and with a depth of 16 feet. At the end of the canal the water passes over the crest of a weir and back into the canal from which it originally came. Thus a circulation is maintained without continuously drawing water from the Charles.

Measure Power

The iron channel on the third floor is flush riveted and the space between the plates is caulked with lead to provide a smooth surface to decrease friction and to eliminate eddies which might be caused by cracks. To measure power, a torsion shaft, which works on the principle of the uniform twist of a rod for a given load together with an Aldon dynometer is used.

Centrifugal pumps are much used in everyday work because of their efficiency of which that of the Institute system with a rating of from 65 to 75 per cent. is an example.

The head of the English department at the University of Rochester says that the proportion of slang expressions taken from the Broadway of ten years ago is entirely too large to make for a witty conversation.

Institute's Rats Commit Suicide In Water Canals

Steam and Hydraulics Laboratory Obtains Supply From Charles River Basin

Rats frequently insist upon the privilege of committing suicide in the canals which carry water from the Charles River Basin to the Steam and Hydraulics Laboratory in Building 3. Little trouble is caused by other foreign bodies entering the canals with this one exception. Since they are securely covered by gratings, no student is in danger of imitating the smaller animal.

Revolving at the rate of 30,000 R. P. M. on a shaft not much thicker than a lead pencil, a seven and one-half horse power DeLaval Turbine is driving, through a ten to one reduction gear, one of the three pumps that supplies the laboratory with water. Another of the pumps is driven by a DeLaval Turbine at a speed of 24,000 R. P. M. delivering twelve horsepower. Some idea of the total amount of water handled by this pump may be gained from the fact that its piping is eight inches in diameter.

Water Stored in Canals

All of the pumps are centrifugal, and the largest is connected to a 350 horsepower angle compound steam engine, which can deliver, through its thirty inch pipes, over 24,000 gallons of water per minute.

Although the laboratory uses a large amount of water when the pumps are running, the supply taken from the Charles River is not so great as may be expected because the water is recirculated and stored in a system of canals underlying the basement.

Enough fresh water is taken in at intervals to prevent any tendencies to stagnation, however. Cold water from

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HOLD YEARBOOK MELEE TODAY

BATTLE OF CENTURY TO BE FOUGHT FOR TECHNIQUE PADDLES

Over One Hundred Fraternity And Dorm Men To Sweat For Honors

BLOODY SCRAP IN STORE

Bang, Rush, grunt, cops, there off— — — — The annual Technique rush, the 25th annual to be exact, will be off at 3 o'clock this afternoon, in the athletic field. Right at the fifty yard marker of the football field, the old greased hut will stand with the little round opening in the top from which will issue the coveted bits of wood which represent paddles.

All the oil that can be uncovered within a radius of two miles of the Institute will be rushed to the scene to cover the resting place of the coveted paddles. A warning is given to all car owners in the vicinity to lock the crank case, for it is reported the committee is out for blood—no, oil.

Eddie Morris Will Bawl Announcements

At three sharp the well known Harvard Stadium official noise maker and announcer, Eddie Morris, will emerge from somewhere with a trio of full blooded Scotch bagpipers and announce the new board for Technique and pay his adieu to the old board. Following this touching ceremony he will announce the few rules to the doomed.

Very intricate rules have been arranged for this year's bull fight. The first and primary don't is "Thou shalt not kill" (anything but third degree murder will be permitted unofficially of course). In order to appease the inquiring S. P. C. A. officials the following rules have very reluctantly been added. No brass knuckles, black-jacks, night clubs, sand bags or tear gas bombs will be allowed on the persons of the contestants. To pass the board of censors a pair of short pants will be required at least at the start.

Twenty Paddles Will Be Given

Volume XLVI of the Technique feels exceedingly flush in this year of depression with its stock market crash and low price of cotton and they are giving out twenty brand new issues of the new volume just off the press, the first twenty that anyone can get will be on the desk at the edge of the field for distribution to the valiant fighters. Incidentally if any husky engineer has not as yet bought a Technique this will be his last chance, for none will be on sale, they are all sold out.

From some unknown source the first paddle will appear and the rush will begin with the Dormitories out to clean up the Fraternities as has been the custom for the past several years. The fight promises to be warm and bloody and the emergency hospital station that will be erected is prepared to treat all sorts of injuries from a broken arm to the more serious type of misfortune that might befall the battlers.

Spectators Are Advised to Keep Distance

Rope Fences will be installed about the hut at a safe distance and all well dressed spectators are warned to control their emotions and stay behind the protecting hemp for a spot from crank case oil is not the easiest thing to remove from a silk dress or a palm beach suit.

James E. Norcross '33, in charge of this year's Rush, and the rest of the 1931 board have been laboring to make this year's rush the best remembered single event of the year or perhaps two years if it takes that long to recover from the injuries received or the bad after effects of drinking filthy petroleum products.

Free-For-All Fight

Many motives seem to move the men to enter into this fight. To some the idea of a free-for-all fight seems to offer a particular attraction, while others are impelled to uphold the honor of their fraternity or the dormitories. Many have an overwhelming desire to cover themselves with fame or grease as the case may be, and the desire to win the paddles is not to be denied.

Has Physical Liability

Rumor says about the Institute that the Rush changes the students who take part in it. No definition is made as to whether they are changed in regard to sportsmanship, disposition, spirit of cooperation, outlook on life, or in general appearance, but it seems certain that they are greatly changed physically.

Anyone who has witnessed the mortal agonies endured by the competitors for paddles in the past years, can readily testify to this. Many students have limped or crawled off the field assisted by friends, but the aid of the Red Cross in the form of stretchers and ambulances has not as yet been necessary.

Organization Is the Keynote

Many years of past experience have definitely proven that it is practically impossible to accomplish anything without well-organized cooperation between groups. Individuals usually manage to secure nothing but bruises, while the majority of the paddles go to groups from the dormitories or fraternities. The use of systems during the Rush was first inaugurated in 1826, being introduced by the fraternities. Four fraternity men succeeded in capturing two paddles each in that year.

Freshman Wins Four Paddles

The Rush in 1927 was featured by a freshman obtaining four of the much coveted paddles. No reports have been recorded as to whether he recovered from his injuries, but one may surmise that he spent some days in the hospital. As an innovation the first paddle was thrown out on the field concealed in one of a dozen tennis balls. The first free copy of Technique was won by James P. Boggs '30.

Dorms Win 1928 Rush

Cooperation was again the keynote of the 1928 Rush. At the start of the affray, Eddie Morris, well-known Harvard stadium announcer, mounted the

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Architect Plans Enlargement Of Walker Memorial

Overcrowding Necessitates An Immediate Measure of Alteration

Walker Memorial, the center of all the student activities and social affairs, has been discussed many times in the past and is being discussed at the present time. Time and again plans for revision have been made. Some were carried out and some were not. Very probably few of the undergraduates are acquainted with the history of Walker Memorial.

In 1897, after the death of General Francis A. Walker a meeting of the class secretaries was called in order to discuss plans for an adequate memorial to him. In four years sufficient funds were solicited and with the final donation of the Class of 1901 the sum stood at $100,000. From the start it had been planned to use this money for the erection of a gymnasium.

Plans Halted Until 1915

At this time the moving of the Institute from the old location on Boylston Street was being considered and no immediate action was taken on the memorial. By 1915 the matter was again being seriously considered and the original plans were enlarged upon to include a student club house. The Executive Committee with the approval of the contributors revised the plans further to include a dining service, offices for the student activities, and a student lounge, besides the gymnasium.

The actual construction of the long-planned memorial started in 1916. Not until after its completion was its usefulness fully realized. It served so well in everything that had been planned for it that it was soon apparent that enlargement was desirable. In 1923 a committee of students and alumni submitted a report advocating the desired changes. This report was approved by the students and alumni, but the Corporation found it impossible to take action at the time.

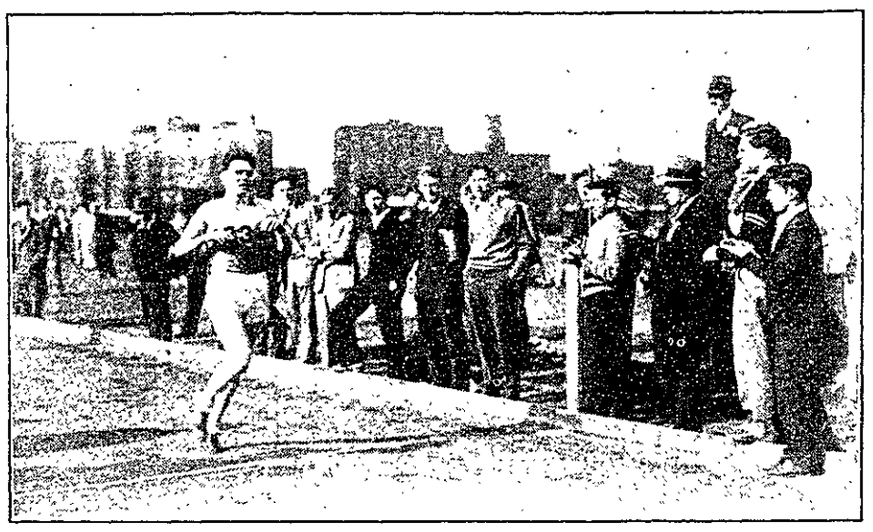
Campaign to "Use Walker"

With the campaign to "Use Walker" which was inaugurated last year the deficiencies of Walker Memorial again became obvious. A committee was appointed by the Institute Committee and it prepared a report on the matter. Harry J. Carlson '92 also drew plans for the additions to be made. These plans appeared in the May, 1930 issue of the Technology Review.

The present plan provides for an auditorium capable of seating 1400 people. The seating capacity of this auditorium would be twice that of Room 10-250, the largest lecture hall at the Institute. It would still be too small, however, to conduct commencement exercises.

This auditorium will be placed in the new right wing that is to be added. In the left wing will be placed the dining service with an adequate kitchen behind on the first floor. The basement is to accommodate a new billiard room and several offices for the use of the activities. The Main Hall of Walker Memorial as it stands today will be made into a lounge. The present kitchen will also be converted into a grill room. The basements of these new wings are to contain more bowling alleys, coatrooms, storerooms and offices for the activities.

Robert E. Mann '34, Winning Two Mile Run in Interclass Meeet Held on Saturday, April 11



Two Outstanding Developments in Building Construction on Exhibition

Demonstrate Welding of Steel And New Portland Cement Floor Slabs

Two of the outstanding new developments in the field of building construction are today being demonstrated in the exhibit of the latest department to be added to the Institute where Course XVII, Building construction, is pouring light-weight floor slabs of a new Portland cement product and oxy-acetylene welding of structural steel members.

The exhibit of the department, however, will not consist entirely of new developments but will in general present the method of instruction used by the department in teaching the subject of Building Construction together with examples of high grade interior finish work and displays of many of the materials entering into the construction of modern buildings.

Two of Newest Developments

The new cement product the making of which will be demonstrated at various times during the afternoon and evening fills a long-felt want in the construction field for some strong fire resistant, and comparatively light weight material to be used for interior partitions, floor slabs, and roof deck. This recent development, called Aerocrete, looks something like a cement sponge and is made by proper manipulation of a mixture of Portland cement and a special aluminum powder.

Welding of structural steel members has only recently become a practical method of joining the steel used in construction and avoids the noisy rivet hammers which have for so long been a cause of complaint against the erection of new buildings in congested areas.

The demonstration today will illustrate how the oxy-acetylene torch is used in this class of work. During the afternoon and evening an experienced operator will do welding work on model structural steel members.

Movies To Be Shown

During the entire afternoon and again in the evening a series of moving pictures illustrating various phases of construction work will be shown at half hour intervals. The films will treat the actual construction of a building, the manufacture of some of the basic materials used in construction and the fabricating of some parts that enter into the finished structure.

Beginning at 2 o'clock and coming in this order at half hour intervals will be shown the following films: at 2, The Welding of Structural Steel; at 2:30, The Construction of the Empire State Building; at 3, The Fabrication of Steel for the Bank of Manhattan Building; at 3:30, the Manufacture of Face Brick; at 4, the Story of Portland Cement; and at 4:30 The Manufacture of Modern Plumbing Fixtures.

In the evening, these pictures will be shown in the same order, beginning at 7 and continuing at half hour intervals.

Show Building Materials

In addition to the demonstrations and the moving pictures the department will have on exhibit models showing typical construction of a building using corrugated asbestos boards as wall and roofing material and several types of asbestos shingles as well as different types of built-up roofing.

Displays of accessories used in building will be on exhibit, and samples of various woods and building stones will be shown.

All Laboratories To Be Open to Visitors

Students of Chemistry Perform Experiments; Part of Regular Work

Following the custom of past years, all chemical laboratories will be open to the public on Open House Day. As far as the students are concerned, the day begins at nine in the morning, and ends at ten at night. They will be admitted to work as soon as the laboratories are opened, and if they feel so inclined, may work through until ten o'clock at night.

Instructors will be on duty all during the day, to answer any questions which visitors may wish to ask, and also to take charge of the workers in the laboratory. It is supposed that most of the men who have courses in the department will take advantage of the opportunity to catch up with their back work. In former years, the laboratories have had a fine representation of students.

Change in Arrangements

This year there has been a change in the method of arranging Open House Day Chemical Events. The students themselves are making all plans, and the faculty is following lines laid down by those students in charge. This is a distinct difference from the policy of past years, when the faculty did most of the planning.

Visitors to the Institute may feel free to visit the laboratories from two o'clock in the afternoon until ten at night. Interesting experiments will be carried on, as part of the regular work of the students in the respective laboratories, and an excellent idea as to the kind of work done by each division of the Chemistry Department may be obtained.

REDFIELD PROCTOR OFFERS FELLOWSHIP

Mr. Redfield Proctor of the Corporation has established a new travelling Fellowship of $1500 to be offered annually during the period of 1931-1934. The fellowship is to be known as the Redfield Proctor Travelling Fellowship and is for graduate study abroad in an English speaking university approved by the Dean of Graduate Students, and is open to any graduate of the Institute, or in case there is no suitably qualified candidate among the graduates of the Institute, open to any graduate student who has been in residence for at least a year.

Applications for this fellowship should be made on the usual graduate scholarship blanks obtainable at the Admissions Office, Room 3-107. Applicants should also consult the head of their respective courses and the Dean of Graduate Students at the time of filling applications.

TRACK TEAM AT HARVARD FOR G. B. I. FINALS TODAY

Trackmen Engage Boston Colleges At Harvard Bowl

Greater Boston Intercollegiate Meet Finals Start at Two-Thirty Today

At Harvard Stadium yesterday afternoon, the trial heats were run off in the Greater Boston Intercollegiate Track Meet, and the finals of each event will be held this afternoon, the first matches beginning at 2:30 p. m. Technology's list of entries was the second largest this year with eighty-five men scheduled to compete, while Harvard leads the list in numbers.

Thirty separate events will include representatives from the Institute. Captain Bror Grondal will enter both the shotput and the discus, and is prepared to do full justice to both. Last year, he captured a third place in the shot, and with a noticeable improvement in his distances this year, the outcome of this event is a matter for anyone's conjecture.

Both Yearlings and Varsity Enter

Varsity men will not be alone at the meet, as the freshman team will enter as well. Both the Varsity and the freshmen ought to score in the two dashes, with Hall, Soisalo, Rosas, and Kinraide all showing good form this season, and in Dick Bell, the freshmen have a potential winner, according to Coach Hedlund.

Jewett, Mulliken and Walsh are slated for the Varsity quarter, and Jewett has on occasion, been able to equal the Institute record of 50 seconds in this event, so that he is a strong contender for honors.

MacKay is the sole entry in the 880, the team being weak in this event this year, but he can cut his running time down to two minutes flat, when necessary which time should be good for a place. The freshmen entries in the half are Rees, Schwarz and J. G. Smith, both of whom have shown more than the average freshman ability.

Freshman Mile Strong

Charles Hall, star freshman miler, holds the Institute first year record, and Bob Mann who has run Hall a dead heat race, will furnish the other entries in their race plenty of competition. In the Varsity mile, Allbright and Kearns will run, two men who have experience and skill gained from intensive competition.

Don Gilman will enter the two mile run, without any other mates from the team. He has run a great number of successful races for the Institute, and can be depended upon to give a fine race.

Coon and Ross in High Hurdles

High hurdle entries include Everett Coon and Irvine Ross for the Varsity, and Charles Hill and Kingman Crosby for the frosh. All four of these men are of the first order, and have fought many races out among themselves, in the Interclass meets. Both of the freshmen gave a good account of themselves at the Andover meet last Saturday. The only Institute entry in the low hurdles, is Jack Lynch, who will carry on in the absence of Steverman, who has been out of competition the whole year, because of sickness.

Beside Bror Grondal in the weights, there will be Bill Moody, an ex-two miler, who has made some remarkable hammer throws lately. For the freshmen, Max Winerman is the leader, and will be stoutly backed by Jewett.

Robertson, a Junior, who broke the Institute javelin record recently, will have a chance to set a new record for the meet. He has made marks eight feet more than the meet record and, in any event, will be a sure bet for points.

Coon and Benjamin will high jump for the Varsity, along with Ben Hazeltine, who scored in last year's meet. Any one of these men is good choice for a winner.

Prospects Good

Last year Technology tied with Boston College for the third place, and the freshman with the Boston College freshmen. Considering this and the present talent which has come to light during the season, all looks well for the trackmen.

FOUR RACES TO BE ROWED ON CHARLES

(Continued from Page One)

stroked the heavy frosh last year and went to Annapolis as a substitute for the Jay Vees and Varsity. In this race he replaces Lawrence who stroked the shell to victory on the Severn last Saturday.

Powerful Frosh Boat

Rowing in the yearling Engineer boat is expected to be considerably better than that of previous freshmen crews. This lineup averages about 170 pounds and has shown up exceedingly well in practice drills and time trials. In its only race thus far, against two nicked crews from the Union Boat Club, and two other frosh boatings, this crew very easily took a victory of about two lengths.

The lineups follow: Varsity: Thieler, Bow; Regan, 2, Pleasants, 3; Valentine, 4; Cimorelli 5; Hapgood, 6; Miller, 7; Richardson, stroke; Whitaker, cox.

Junior Varsity: MacLeod, Bow, Binner, 2 Birdsell, 3; Cummings, 4; Dumming, 5; Evans, 6; Glenn 7; Trimble, stroke; Dunlap, cox.

150 pound Varsity: Christie, Bow; Kirkpatrick, 2; Raymond, 3; Levine, 4; Anderson, 5; Casey, 6; Walsh, 7; Bearce, stroke; MacMahon cox.

Freshman: Wing, Bow; Roulston, 2; Murdoch, 3; Nordos, 4; Loewenstein, 5; Mowatt, 6; Lucke, 7; Westfall, 8; Humphries, cox.

GOLF TEAM DEFEATS B. U. BY 6-0 SCORE

In their initial match of the year, the M. I. T. golf team whitewashed Boston University Thursday afternoon at the Unicorn Golf Club, 6 to 0. Today they will meet the Worcester Polytechnic team at the Weston Club.

All of the matches were taken before the last two holes of the match were completed. Captain Yates won his match from Knowles of B. U., 4 up and 2 to go. Churchill defeated Kellogg, 3 and 2; Fearnside defeated Tyson, 3 and 2; and Metcher defeated Gustafson, 4 and 2.

TENNIS TEAM WILL PLAY HOLY CROSS FOR NEXT MATCH

Eight Men Make Trip to Meet Today—Dame May Be Able To Play

VICTORIOUS IN ONE MEET

Technology's tennis team journeys to Worcester to play Holy Cross this afternoon. The freshmen have a match scheduled with Boston University freshmen, but the game may be cancelled on account of Open House and guard duty.

Eight men are making the trip to Worcester to give Coach Summers a whole squad to pick his team from. Captain Dame, provided his nose has healed enough to allow him to play, will be number one. Dame has been out for nearly a week now, and he should be in condition by now.

Jones Will Play as Second Man

Bill Jones will play the second Holy Cross man. Other men making the trip will include Studley, Regan, Feustel, Ross, Loftus and Ford. The first four of these men with Dame and Jones, will probably be the only ones to see action.

Last Wednesday afternoon the Varsity was scheduled to play Tufts. They arrived just before the last bit of rain and snow was over, and consequently the matches could not be played. The managers of the two schools were not able to come to an agreement as to the playoff date, so there will be no meet with the Tufts Varsity this season.

Holy Cross Defeated in First Match

Holy Cross has had only one meet to date, and that was rather disastrous. The matches were with Harvard, and the Holy Cross team was defeated by a 9-0 score, a score which Harvard has the habit of making in tennis.

Thursday afternoon, being a little more favorable, the Technology freshmen were able to beat the Tufts yearlings by a 5-1 score. The only victory for Tufts was credited to Carey when he defeated Feuchter of Tech 6—4, 6—4. All the other yearlings won their matches easily.

Eder Wins

Eder, playing number one, played nice tennis to defeat Whittaker 6—4, 6—1. Although his brand of ball was not up to that which he exhibited at Exeter last Saturday, he was not extended a great deal to win.

Tufts' first doubles team, composed of Whittaker and Carey, extended the Technology yearlings all the way. Eder and Wood had coasted through the first set 6—4, but the Tufts pair opened up a bit and came through with the second set 3—6. They continued their winning ways through four games more, but finally were overcome, giving the last set to the Engineers.

A match is scheduled with the Boston University freshmen today, but the managers seemed anxious to cancel it on account of the Open House.

TEXTILE LABS OPEN TO VISITORS TODAY

(Continued from Page One)

has been made possible by a brand new machine recently installed in the Textile Laboratory, which has an electric recorder. Technology is the first to ever make use of such a type of machine.

Visitors can see a full set of cotton working machinery, from cards to looms, in Room 3-315. A new Draper automatic loom is running on cotton toweling today. Recently a new system of long draft spinning has been installed which is called Casablanca spinning. This system was originated in Spain and is being carried on in this country by the Whitin Machinery Company.

Open House Day Draws Visitors To Exhibitions

Spectacular Displays Prove Interesting To Those Attending

(Continued from Page One)

to portray the complete life of the Technology student in relation to the institute and it will be portrayed in as realistic form as possible by the student himself.

Programs will be readily obtainable at all entrances, containing general and specific information about the different departmental exhibits and the activities of the day. Further information may be readily obtained from the R. O. T. C. men stationed on every floor of each building at all hours during the day. These men are not permitted to leave their posts and act as guides but they are there for the purpose of supplying information and pointing out directions. In addition the members of the Open House committee, all members of the Faculty and instructors, may be approached for information. All will be identified by the white boutonnieres which they will wear.

Many Activities Today

There are many and varied activities taking place besides the laboratory demonstrations. They are of a less serious nature and are sure to attract and appeal to many. At 3 o'clock the annual Technique rush will take place in Tech Field. At 4 o'clock the triangular crew race between Harvard, Princeton, and M. I. T. is scheduled to take place. In the event of rought water this will come off later on in the afternoon when the Basin has calmed.

At 6.45 o'clock President Compton will hold an informal reception in the Executive Offices on the second floor of Building 3. All are welcome to attend this reception and they will be introduced to the President and his retinue by members of the Combined Professional Societies. At 7.45 o'clock a band concert wil be given in the Great Court by a 32-piece band. This will be light concert music and in the advent of rain, the concert will be given in the Main Lobby.

In addition to the crew race in the afternoon, the soccer team is playing an exhibition game with Harvard at 2 o'clock. At the same time several track events will be staged on Tech Field. In Hangar gymnasium the afternoon activities comprise boxing, wrestling and fencing exhibitions and at 3 o'clock the Beaver Key Tea Dance will take place in Walker gymnasium.

CAFETERIA OFFERS A NEW ICE CREAM

An entirely new innovation in ice cream will mark the offering of the Walker Memorial Dining Service for Open House. Processed and perfected by the Georgian Cafeteria Co., the new vegetable ice cream has already been given publicity in the Associated Press.

Present in it, in a pleasing form, is Vitamin D, and it can be obtained in flavors of spinach, carrots, beets, and liver. From the start the new ice cream has proven itself very popular. During the first day it was on sale, fifteen gallons were sold, and yesterday eighteen gallons were finished off by the students.

Copies of the history of Walker Memorial will be issued for the first time in the history of Open House. The eighteen-page booklet has been prepared by the Walker Memorial Committee with the aid of the Dining Service.

The University of Cincinnati has built a "bumming room" for lazy students.

Class Officers

CLASS OF 1931

President — Harold P. Champlain
Secretary-Treasurer — James B. Fisk

CLASS OF 1932

President — Donald B. Gilman
Vice-President — William H. Barker
Secretary — William A. Kirkpatrick
Treasurer — Edward N. Poor
Institute Committee — John Lawrence, Thomas E. Sears, Jr.
Executive Committee — Maurice W. Cook, Eugene F. Lynch

CLASS OF 1933

President — Robert G. MacKay
Vice-President — Richard L. Fossett, Jr.
Secretary — Cyrus S. Hapgood
Treasurer — Charles P. Britton
Institute Committee — Charles C. Bell, Wilbur B. Huston
Executive Committee — James P. Mills, Leighton R. Rickards

CLASS OF 1934

President — Henry D. Humphreys
Vice-President — Peter Barry
Secretary — Robert M. Becker
Treasurer — Rex Murdoch
Institute Committee — Richard Bell, Robert M. Emery
Executive Committee — Edward P. Bromley, Louis P. Holladay, 3rd

AERONAUTICS CLUB GLIDERS ARE SHOWN

Interesting Exhibit of Course XVI Is Displayed in Aero Laboratory

Among the exhibits featured today are several put on display by the Aeronautical Department and the Aeronautical Engineering Society.

In the rigging crib of the Guggenheim Aeronautical Laboratory are various parts of gliders, which members of the Aeronautical Engineering Society have built and flown, and parts of the wing of a new primary glider now under construction.

Cantilever Wing Exhibited

Of interest to those who are devoted to airplane design is the section of a wing being built by Mr. R. S. Robinson of Waikato, New Zealand. This wing, being developed with the intention of being used as part of a thesis in Aeronautical Engineering, is of the full cantilever type and is to be employed in research work on a small high-speed monoplane.

Glider enthusiasts can see the fuselage and wings of the Society's glider, the A. E. S. 409, which was flown on the Cape during the Spring Recess. This glider is of the simplest, or primary, type, and was designed several years ago by members of the Department of Aeronautical Engineering. This year it participated in sixty-nine flights until one of the members misjudged his distance and nose-dived into a sand dune, damaging the ship to such an extent that it will be retired from flying.

In order to show visitors around and to answer questions it has been planned by the managing board of the Aeronautical Engineering Society to have several members on duty in the crib.

On display are also blue prints of the new primary glider, and some of the plans for the new soaring glider, for which a competition in designs was held.

Feature Gold Run In Mining Exhibit At Ore Lab Today

Dept. of Mining, Metallurgy To Have All Equipment In Operation

"Thar's gold in them thar hills." Colorful days of the old forty-niners and the trail of '98 are recalled by the Gold Run exhibition in the Ore Dressing Laboratory held under the auspices of the Department of Mining and Metallurgy. The run is complete beginning with the gravity stamp, the first operation at the time the ore is taken from the ground, and running through the various concentrating machines.

Another feature is the operation of the lead blast furnace. This is in the basement of Building 8. Other furnaces will also be in operation showing recent developments in Fire Metallurgy.

Petroleum Division Hampered

The Petroleum division is hampered to some extent since it has little equipment absolutely its own. There are, however, many films to illustrate thoroughly many of the more interesting features of the petroleum industry. Great care has been taken in the choosing of suitable films, and as much advertising as possible has been omitted.

A very interesting show is given by the Geophysical division. This division of mining is comparatively new in its development and promises much in the future.

Physical Metallurgists hold forth on the top floor of Building 8. There the methods of preparing samples for photomicrograph work are shown. Also, the new ideas on case hardening of metals by ammonia gas will be in evidence, and X-ray work with metals is on view.

In the stamp Mill Run the ore is a real gold variety from Nova Scotia gold mines. Here it is given a preliminary breaking. It is fed to the stamp and crushed to a very small size and then run over an amalgamated plate. On this most of the gold is collected. The material passing the plate is carried to a Vanner. This is a table for the concentrating of the material, and is accomplished by giving the table a side shake combined with the effect of running water.

European Students Contrast Strongly With Those in American Institutions

Scholars In Spain Take Active Interest In Affairs Of State

The following article, which appeared in the "New Freeman" of April 8, offers an interesting commentary on the American college student:

"The news from Spain brings back to my mind a topic that I have already mentioned in my weekly musings, the difference that I notice between university students in America and in Europe. Last week, thousands of Spanish students fought the Madrid police with firearms and raised Cain in the streets and public squares. One student was killed and several wounded; one of the police was killed.

Girls Join Fray

"Next day three thousand students, with a detachment of girl students in the forefront, began to march towards the royal palace to protest against the action of the police. The procession was broken up, and then there was another riot.

"The National Students' Federation declared a general strike at Madrid, demanding the arrest and trial of the national head of police. The Dean of the Faculty of Medicine resigned, saying he was not in sympathy with the Government's policy of repression. Students at Barcelona and Valencia went on the warpath, with some casualties reported. The Director-General of police finally handed in his resignation.

Want Men Out of Hock

"Well, now, what was all this about? What did these students want so much that when the authorities refused it to them they went straight off into revolution, some waving the red flag and some whooping for a republic? They wanted to demonstrate in favor of a general amnesty for political prisoners held in hock, as a lot of ours were after the War, Eugene Debs among them, and as some of ours still are, Mooney among them.

"That was all; just a little matter of justice, decency, and patriotic pride on the part of a few thousand youngsters who thought their country should be in a better business than that or else go out of business altogether. The principles at issue between the students and the Government were those which the Bill of Rights established as fundamental—free speech, free assembly and a free press.

"What their proposed demonstration would amount to was only the regular thing — processions, gatherings, and speechifyings in behalf of the prisoners hived up in jail. When the right to hold a demonstration was denied them. they painted themselves for war, dug up the hatchet and started forth for a high, excessive time.

". . . It is improbable that many of them were any closer to any of the prisoners in a personal way than students at Harvard, Yale, Wesleyan, were to Sacco and Vanzetti; than students at Berkeley and Leland Stanford are to Tom Mooney; or than students at Chicago, Northwestern, Madison and Urbana were to Eugene Debs . . . the American student seems incapable of any vigorous interest in matters that are bigger than he is, and incapable of putting up a hot scrap for them; the European student seems capable of doing both.

Youth Too Passive

"I often wonder how teachers get along with the kind of youth that sits passively, waiting not only to be told how to get what it wants, but to be told what it ought to want. But I dare say it suits them; no doubt it helps to develop a corresponding type of teacher, and so everything jogs along smoothly, like a well-managed funeral or one of Mr. Hoover's journeys of State.

"I am afraid I am too much of Mr. Jefferson's mind to be a good pedagogue. When Massachusetts farmers broke out under the leadership of Daniel Shays, and scared the President and the Hooverite element in his cabinet into fits, Mr. Jefferson wrote naïvely to Mrs. John Adams that 'I like a little rebellion now and then.' Maybe some university will offer me a job some day, so I will soften this down somewhat and say I like youth that is capable of a little rebellion now and then. Not over compulsory chapel or abolishing football or any of that small-bore, undersized stuff, but in a big cause where some elemental human rights are at stake. That's my notion of academic freedom, and even though I have tried to put it gently and decorously, I am afraid I may have to wait a good while for any American university to offer me that job."

The average student spends 8½ hours sleeping, 2¾ hours studying and 3½ hours at play, according to a recent survey at Barnard College.

GIFT OF $170,000 IS TO BE UTILIZED IN PHYSICS RESEARCH

Rockefeller Foundation Will Distribute Contribution Over Six Years

SUPPLEMENTS NEW PLANS

A gift of $170,000 from the Rockefeller Foundation to be used for research in physics, chemistry, geology, and biology at the Institute was announced by President Karl T. Compton of Technology Monday.

The fund, which is to be distributed over a period of six years, is intended to supplement comprehensive plans of Technology for extension of its work in fundamental research, and to demonstrate the importance of investigations in the basic sciences, upon which all understanding as well as utilization of the forces of nature are based.

New Laboratories

The Institute is already preparing for greatly increased activity in fundamental research by the construction of the new George Eastman research laboratories, which are now being built and are expected to be completed late this year. The new buildings, which are to be units of the main educational group, will give the Institute much needed facilities for investigations and advanced instruction in physics and chemistry.

The buildings include a large laboratory structure of four stories plus basement, with facilities for research, a shop for construction and maintenance of research instruments, a lecture room, library, and reading room for the use of the staff and students in physics and chemistry. Nearby will be a somewhat smaller building which will be devoted to research in spectroscopy. Both buildings represent the most advanced knowledge in laboratory construction, and their equipment is expected to give the Institute unexcelled facilities for carrying on research in the basic sciences.

Contemplate Other Additions

Plans for the expansion of fundamental research at Technology also include the construction in the near future of a cryogenic laboratory for studies in the science of low temperatures, with equipment for the production of liquid nitrogen, hydrogen, and helium.

Life at Robert College Described by Technology Representative in Turkey

Fred N. Dickerman Tells Of Turkish Celebration in Istamboul

Only three years ago, THE TECH wrote, "Tech-in-Turkey will be a reality in the near future." This plan for sending an Institute graduate every year as an instructor to Robert College, Istamboul, originated in 1927 when Mr. William H. Van Dusen, '27, speaking in the Herrick House on the ideal program of a Christian association emphasized the importance of foreign work. Several American colleges were already doing such work in Japanese, Chinese, and African schools.

Professor Clarence H. Sutherland, '10, who had been an exchange professor at Robert College in Turkey, recommended that school for the T. C. A. project since it had an engineering department and since English was the language used there. In January, 1928, Dr. Gates, President of the College, spoke at the Institute, and soon afterward the project was accepted.

Judson T. Biehle, '27, was selected to go to Robert College as a tutor in physics. He left in the fall of 1928, intending to stay for one year; but he was so well liked that he was granted a reappointment and he remained for the succeeding year also. Now Fred N. Dickerman, former vice-president of the T. C. A., is taking his place.

From the weekly letters which come to Mr. Bror Grondal, '31, of the T. C. A., from Mr. Dickerman, one can obtain an idea of the variety and interest of his life in Istamboul. In one of his letters, for instance, he describes the Moslem celebration of the "Night of Power." "I certainly wish you could have been with me Saturday night," he writes. "The Moslems celebrated the 'Night of Power.' They believe that on this night the prophet Mohammed received his authority from Allah. . . . The 'amman' or priest leads the praying by chanting at the front of the mosque. Another personage seems to come in on a sort of chorus. The general idea of the praying is like this. First they stand awhile, then bow from the waist very low, straighten up, then drop to their knees and place their foreheads on the ground. The dull rumble as 15,000 do this is terribly impressive but indescribable. Next they straighten up from the knees again, possibly bow again, and finally rise to the feet. All this is done in such perfect unison that each row seems to move as one man. Of course, it takes the 'amman's' voice an appreciable length of time to reach those at the back, so each motion runs back through the crowd like a wave on the sea. All the white handkerchiefs seem to suddenly disappear when they bow and then reappear."

In another letter, Mr. Dickerman tells of an evening spent at "tuning in." "When I got back to my room that night, I put the short wave coils in my radio set and began to see what stations I could get. . . . The first station I got was Schenectady, W2XAF, on 31.28 meters, broadcasting Rudy Vallee and the Fleischman Yeast Hour. I even heard the 'Peanut Vender' which I understand is much heard at home. It's a good thing the next day was Friday, because I sat up until 4:30 A. M. listening.

"Since then I have heard U. S. A. several times, even as early as 11:00 P. M. which is 4:00 over there. I also have heard W8XK, Pittsburgh run by KDKA. Besides America I regularly get London, Rome, Holland,

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RATS COMMIT SUICIDE IN INSTITUTE CANALS

(Continued from Page Two)

the river flows into the central canal while the condensing water pumps make delivery into a series of branch canals.

Among the many items which are the subject of research work in the laboratory are several theses on air measurements and steam, and three hydraulic investigations. Under air measurement can be cited the study of the flow of air with very small differential pressures through orifices to determine coefficients, air flow through a Bernitz furnace lining, and the flow of air through automobile inlet valves with special attention to the effect of the type of valve to the quantity of flow.

Steam investigations are being made to determine the effectiveness of oil extraction steam purifiers and on the capacity of steam reducing valves. In the study of certain problems in hydraulics, a model of a dam spillway, built to scale, has been constructed. The objective is to determine the capacity of a spillway and the action of the flood wave due to opening the gates to discharge water under a dam.

Launch With Small Broadcasting Set To Follow Crews

Signal Corps Will Transmit Results of the Race Along Course

Perhaps one of the most useful ideas in regard to the crew race today is being tried out by the M. I. T. Radio Society with their Army broadcasting outfit. Members of the society have been working all this week in perfecting details. Special permission of the Chief Signal Officer at Washington has been secured by the Institute signal corps R. O. T. C. unit. The transmission will be in the regular broadcast band, the frequency being either 660 or 930 kilocycles.

Tests run last Friday and Saturday indicated complete success for the project. It is anticipated that the signals will be received on all the broadcast receivers in the vicinity of the Basin. The first tests were made from the boat house to several of the fraternity houses in the neighborhood. The signals were reported strong and of excellent quality.

The transmitter to be used is the standard Army D109. Saturday tests in a launch with a receiver at the boat house indicated the outstanding ability of the little transmitter. Reception on a standard Bosch receiver at the Riverside Apartments was excellent throughout the course.

Captain Eyster and his assistants have put much time and preparation in the anticipation of this event and offer it as their contribution to the Open House festivities. The launch carrying the apparatus today will follow directly behind the contestants and will keep the listeners informed accurately as to the progress of the race. Receivers and amplifiers have been installed in the boat house and in Walker Memorial.

Princeton is to have a new $95,000 post office.

* * *

As a special concession to seniors of Lynchburg College they are allowed to make dates with the permission of the faculty, and leave the campus after six in the evening without an O. K.

* * *

Because students accused of disorder told college authorities they were not able to hear the lectures, officials of Oberlin College hired an acoustical engineer and had the chapel's acoustics repaired.

TECHNIQUE FIGHT WILL BE FEATURE

Over One Hundred Will Battle For Twenty Paddles

(Continued from Page Three)

hut on the field. After announcing the new board of the Technique, he explained the rules to the contestants, and the anticipated brawl was on.

The first paddle was released from a conveyor over the field, and because of the great pressure in the center no one was able to capture it. It was finally caught at the edge of the crowd by Fred Earl '28, a man from the dormitories who succeeded in retaining possession just long enough for the marshals to pull off the struggling mass of humanity piled on top of him.

French Chief Attraction

From the viewpoint of bystanders, one of the high spots of the day was the exhibition of nerve by Steve French '28, a husky little fellow from the dormitories. When one of the fraternity delegations attempted to put a man on top of the hut, he cried, "Get that guy," and followed this outburst with the general announcement that the fraternity boys might just as well go home as they would get no paddles. After winning three paddles for himself, he gave his attention to the direction of his cohorts from the dormitories.

Fierce Fighting in 1929

The 1929 Rush was characterized by fighting of the gamest kind from start to finish. Over 40 students dared their lives in an attempt to win the coveted paddles and incidentally to cover themselves with dirt and grease. A crowd had gathered long before the event was scheduled to start, and the roofs of cars and adjacent buildings had to be resorted to for accommodations.

Immediately preceding the Rush a long line of white-robed figures, comprising the old and new boards of Technique, gathered in the center of the field in a huge circle while Eddie Morris again announced the new board of the yearbook. After the rules had been explained, a pistol shot rent the air as a large white beach ball suddenly appeared on the field. After a wave of fighting which soon covered the entire field, Norman M. Dahl '29 secured undisputed possession of the ball and the honors of the occasion.

Halper Gets First Paddle

A shot gave the signal for the Rush and the battling students surrounded the hut, coated with grease and oil, from which the paddles were to issue at one minute intervals. Alfred W. Halper '32 was the first to obtain reward for his mistreated flesh in the form of paddle number 2. The dormitory men were out in force with two well-organized teams while the usual fraternity groups were absent. Fraternity men who did enter the war only succeeded in winning one paddle.

One corpulent man gained the roof and performed a war dance to the intense amusement of the spectators. Unfortunately he was hauled down by his rivals without obtaining a single paddle. The top honors of the battle go to Glenn N. Andrews '29, who won three paddles.

At the bottom of a covered sand pile it was announced lay the first paddle and immediately a mountain of figures grew over the neglected heap of finely divided silicon dioxide which was piled innocently near the hut. A grinning countenance of someone appeared, which was some time later identified to be that of Louis J. Vassalotti '32, this year's wrestling star. He was found to be clutching in mortal terror the bit of wood which went under the title of a paddle and to him was presented the first Technique with much ado and pomp.

Top honors of the battle went to a sophomore, Robert B. Axford, better known as "Shorty," who upheld the honor of the Dormitories by winning three paddles all by himself. The fraternities were very poorly represented with only one man from across the river getting a paddle.

Not Meant For Faint Hearted

All this is not intended to scare the bashful or timid from seeing the bloody performance, but in the event of weak heart it is strongly advised that the owner of such remain at a considerable distance away, far enough so that the groans of the injured will not reach his ears.

Old Landmark Passes as Janitor Cuts Moustache

Students who are familiar with the personnel of the janitor service in Building Two have not yet recovered from the shock of seeing one of their favorites walking boldly around without his moustache. Several members of the faculty as well as most of the undergraduates who frequent that part of the Institute have been speculating on the reason why he did this drastic thing. Some of the suggested causes finally arrived at are: It would be too hot to wear in the summer, he is hiding from his wife or, it gets too full of chalk dust.

AERONAUTICAL CLUB MAKES GLIDER TRIP

Sixty-Nine Flights Are Made Before Final Crack-up

During the spring recess the Aeronautical Engineering Society made its annual trip to Cape Cod, where its primary glider, the 409, was assembled and flown.

In charge of the trip were Charles Conwell '31, president of the Society, and Mr. Huckle, of the Aeronautical Engineering Department. The members stayed at the summer home of Professor Sayre at Wellfleet.

A total of sixty-nine flights was made with the glider one of which, a soaring flight, was thirty-two seconds in duration. Experiments were tried in towing it behind a motor car, but as the ground was too soft it was found that the automobile could not gain sufficient speed to enable the glider to rise from the earth.

Glider Demolished

Several minor accidents occurred, but were repaired in time to allow for several flights. The last accident, a nose dive into a sand dune from a comparatively low altitude, marked the end of the flying activities for the trip. The fuselage was broken in two places, the tail assembly was broken and twisted beyond repair, three wing hinges were ripped out, two struts were bent out of shape, and one wing skid was broken. This undoubtedly marks the end of the career of the 409, as she is of a very old design and has seen many seasons of hard use. A new and lighter ship is in the process of construction and will probably be used next season.

Students taking deep-sea zoology at the University of Miami, Florida, don bathing suits and diving helmets, and descend to the floor of the sea to study marine life.

* * *

Co-eds at the University of Detroit have been forbidden to converse with the male students at any time on the campus, according to The State College News.

* * *

New rules at Montana State University divide the four years into two periods. Students are required to have "C" average at the end of the first two years in order to continue through the last two years.

* * *

A guest lecturer in journalism at the University of Washington intends wearing red flannels and ear muffs as well as carrying an electric heater on his visit to Montreal shortly.

Life of Robert College Teacher Told By Letters

Fred N. Dickerman Tells Of Turkish Celebration in Istamboul

(Continued from Page Six)

Copenhagen, and Zeesen, Germany. With only two bulbs that's pretty good.

"Last Saturday night I woke up two of the other teachers at 4:00 A. M. as they wanted to hear U. S. One of them has been here several years and had never heard the radio advertising, so when he listened to the glowing recommendations of Lucky Strikes, he simply howled. You've no idea how silly it sounds when you are hundreds of miles from the nearest Lucky Strike."

At another time Mr. Dickerman writes, "Istamboul has one thing in common with Boston—you can always talk about the weather. For the past week, we had a south wind and it was just like spring. Today it snowed all day. It is an established fact that when tourist boats come here the weather is invariably poor, and today two boats were due. . . . Tonight it has cleared off and the full moon shining on the snow-covered hills and the Bosphorous makes the scene too beautiful for words. Probably tomorrow the snow will be melted by eight o'clock." But a week later on April 10, he writes, "My hands are so cold I can hardly write and I'm pretty disgusted with the weather."

Numerous amusing incidents enliven Mr. Dickerman's letters. He deseribes, for example, a show in which "one of the females, I swear was over fifty and weighed 300 pounds easily but she tripped about the stage like an elephant." And another time, "A little incident in the boys' dining room the other night afforded some excitement at dinner. There was no teacher at the table, and the boys were snapping prune pits at each other. Two of them got into an argument and said nasty things in Turkish, whereupon one of them threw a tumbler at the other." Which reminds us of some boys not so far away from home.

Although Mr. Dickerman has been at the college only a short time, Mr. Huntington, the vice-president, has already written "how much pleased we are with Mr. Dickerman and how deeply interested all of us at this end are in what Tech is doing for Turkey."

OFFICIAL BULLETINS
OF GENERAL INTEREST

Building Construction — **Mr. Thomas F. McSweeney '16**

Monday, May 4, 10 A.M., Room 1-134

A course of illustrated lectures on "The History of the Art of Building" is being given under the auspices of the Department of Building Construction during the second term by Mr. McSweeney '16.

Open to students and members of the instructing staff.

Welding — **Mr. Peter P. Alexander**

Monday, May 4, 4:00 P.M., Room 4-156

A series of lectures on "The Metallurgy of Welding and Its Industrial Application" is being given during the second term under the auspices of the Department of Mining Engineering and Metallurgy, by Mr. Alexander, Research Engineer, Thomson Research Laboratory, General Electric Company.

Open to students and members of the instructing staff.

CALENDAR

Monday, May 4

5:00 P.M.—Instrumental Club rehearsal, East Lounge, Walker Memorial.

6:00 P.M.—Alpha Phi Delta business meeting, Faculty Dining Room, Walker Memorial.

7:30 P.M.—Armenian Club play rehearsal, West Lounge, Walker Memorial.

Stroboscope To Be Demonstrated Today

New Instrument On Display in Exhibit of Electrical Engineering

(Continued from Page One)

to Technology was especially interested in this machine.

In celebration of the centennial of Michael Faraday's discovery of the principle of magnetic induction, an exhibit is arranged in the Main Lobby illustrating the discovery by means of duplicates of Faraday's original apparatus. In addition, a booklet is being issued telling the story of Faraday's life and its influence on modern electrical engineering.

Transient Ossilograph Exhibited

One of the very few such instruments in the world, a transient ossilograph for measuring the relation between voltage and current and other transient phenomena, is on exhibition in the Dynamo Laboratory.

Among the other unusual instruments that are being shown in the various laboratories is an electro-cardiograph, for studying and recording the action of the heart, one of the latest aids that science has given to the physician. Kenotron sets, network analyzers, transmission and distribution systems in miniature, corona discharges, the breakdown of dielectrics under the action of high voltages, show the nature of the display.

Throughout the afternoon and evening films in connection with engineering subjects will be run at intervals in Room 10-250. The Golden Chain Amplifier will also be set up and in operation. On the same floor will be the exhibit of the Radio Society, concerning high speed transmission of intelligence. The Teletype one of the exhibits, is one of the intricate devices used by the Associated Press for the transmission of messages from the original machine to receiving sets all over the country. It operates on the principle of a master set, automatically typing out the words as they are transmitted to the receiving sets.

The society will receive messages free of charge for transmittal to any part of the United States, possessions of the United States, or Canada, outside of a two hundred and fifty mile radius around Boston.

In the research laboratories photo-electric cells and thyratrons will perform strange tricks. A complete automatic telephone exchange is set up and visitors using it will be enabled to see what actually happens after they lift the receiver.

UNDERGRADUATE

RICHARD'S CUP RACE

Those crews that are going to represent the classes in the Richard's Cup Race must be on the river Monday. All men who are registered in the Institute, are physically fit, and who do not row on one of the three first Varsity crews are eligible.

Infirmary List

James A. Sweeney '34.
Warren A. Wilbur '34.
John Lawrence '32.

CLASSES RE-ELECT THREE PRESIDENTS

(Continued from Page One)

High School he took an active part in activities, being captain of the Cross Country team and president of the Hi-Y club. During his freshman year at the Institute he was captain of both Cross Country and Track teams and is now a wearer of the "T," won in Cross Country. He was vice-president of his class in his Sophomore year, and is a member of the Beaver Club and Beaver Key Society. He is now Captain-elect of the Cross Country Team.

MacKay Elected '33 President

MacKay is from Millinocket, Maine, and prepared for the Institute at Stearns High School and Worcester Academy, where he was active in track. During his Freshman year he was Captain of freshman Cross Country. During the past year he was vice-president of his class and a member of Agenda and Dorclan.

Humphreys Re-elected

Humphreys is a resident of Brookline, Mass., where he attended the Brookline High School and graduated as treasurer of his class, and was also manager of Track. He prepared for Technology at Chauncy Hall School. He is coxswain of the freshman heavies crew and is a member of the Quadrangle Club. He was president of his Class during the past year and Chairman of the Freshman Smoker Committee.

The elections committee reported a record turnout at the polls, especially in the Class of 1933. The Class of 1931 cast 175 ballots out of a possible 586, but this was due to the marked lack of competition and has always been the case in the past. Three hundred and seventy-four of the 551 members of the Class of 1932 voted and the office of president is reported to have been won on a very small majority.

In the Class of 1933, 467 votes were cast, this being the best turn-out as there are 594 members in the class. The freshmen were represented by about half of their class.

It is expected that the new officers will be installed next Thursday. Elections to the Beaver Key Society were cancelled because of a misspelling of one candidate's name and it is planned to have them take place next Wednesday.

STUDENTS PREPARE OPEN HOUSE PLANS

Decide To Dissolve Faculty Committee at Meeting

(Continued from Page One)

had never held a meeting to assist in Open House, that they had done nothing whatsoever in formulating the plans, and that it wished to be dissolved two days before Open House even took place is excellent proof of the complete and sufficient confidence that they have in the students to make a success of Open House.

In comments made by the Faculty Committee members the general sentiment expressed was that the students should be commended for taking the initiative and assuming the responsibility of making arrangements and performing the actual work with regard to Open House. As Bursar Horace S. Ford stated, "It is a reaffirmation of the growth and development of student government and a substantial proof of the fact that the students are fully capable of putting across such activities as Open House."