

## CIRCUS SET SECURED FOR CARNIVAL

### GYM TEAM TIES NAVY IN ANNUAL MEET OF E. I. G. L.

#### FIRSTS ARE ONLY SCORING PLACES IN TOURNAMENT

Reynolds Takes Championship on Rings While Wells Wins on Horizontal

#### WIN SECOND IN TUMBLING

Technology divided first place honors with the champion Navy team at Philadelphia in the Eastern Intercollegiate Gymnastic League's annual meet on Saturday. Both teams took two first places. Dartmouth, University of Chicago, and New York University were next in line with one first each. The teams competing in the meet were: M.I.T., Army, Navy, Princeton, Pennsylvania, Dartmouth, Rutgers, Temple, N. Y. U., Chicago, McGill, and the University of Toronto.

Technology's first places were won on the horizontal bar by Wells and on the rings by Reynolds. Adamson on the side horse and Galbraith in the rope climb won the two Navy first places. Moore of Technology, took third on the side horse. Dolloff took second in tumbling losing out to Gould of Dartmouth. In the all-around competition, Wells took fourth place.

**Wells Wins on Bar**  
On the horizontal bar Wells made a comeback against Hughes of Navy and beat him out for first place. Last week Hughes won from Wells in the Navy meet. In the all-around competition, Wells did good work and took fourth place. Mexies of Chicago won first place while Hughes of Navy and Poole of Army took second and third places respectively.

In tumbling Dolloff took second place in spite of the fact that he stepped off the mat once. He lost out to Gould by eighteen points. When Galbraith of Navy won the rope climb he did not make as good time as he did against Technology the previous week. Last week he made it in the world's record time of 4.2-5 seconds while this week he made it in 4.4-5 seconds.

On the side horse Moore's first series was one of the best there. In his second series he broke several times but in spite of this took third place. Fairchild, slipped on the horse during his first series for rather a bad fall and was thus put out of the running.

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The dormitory tax, which is collected by the Institute, is used to pay for the smoker. At the same time it is rumored that Messrs. Bridge and Pung will give another party some time next month. No definite plans have been made yet but it will be similar to the one given last fall.

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Mr. Arthur Whiting, eminent modern interpreter of music, will give to Technology students and Faculty the fifth and final concert of his series in Room 10-250 tomorrow evening at 8:15 o'clock. He will be assisted by the New York String Quartet.

The personnel of the Quartet includes Mr. Ottokar Cadek, first violin; Mr. Jaroslav Sisovsky, second violin; Mr. Ludrik Schwab, viola; and Mr. Bedrich Vaska, violoncello. In the course of its many concerts in New York and other cities the New York String Quartet has established a reputation which gives it a large following in musical circles. They were secured to play here through the co-operation of the Institute Corporation.

In their program tomorrow evening, the Quartet and Mr. Whiting will present the following selections:

##### STRING QUARTET

Ravel, 1875—Quartet, F. Major

- I Modere
- II Assez vif
- III Tres lent
- IV Vif et agite

##### STRING QUARTET AND PIANOFORTE

Brahms, 1833-1879—Quintet, F. minor op. 34

- I Allegro non troppo
- II Andante, un poco adagio
- III Allegro (Scherzo)
- IV Poco sostenuto—Allegro non troppo

### Problems of Industrial Chemistry Being Investigated at Institute

#### Laboratory of Applied Chemistry Making Contributions to Many Industries

(This is the third of a series of features articles describing the work progressing in the many interesting laboratories and experiment stations in the Institute. Watch for more of these—learn to know Technology.)

Research problems of considerable industrial importance are being worked on in the Research Laboratory of Applied Chemistry. Many chemical industries, manufacturing concerns, and trade associations make use of the facilities of this laboratory by a co-operative arrangement for the solution of the more fundamental types of problems of industrial chemistry. Such close contact with industry has greatly aided the laboratory in accomplishing its primary aim which is the training of men in methods of industrial research.

Organized in 1908 under Dr. William H. Walker to carry on research in technical chemistry, this laboratory has grown, become a part of the later organized Department of Chemical Engineering, and at present has a staff of six research associates and twenty-nine research assistants. The director is now Professor Henry O. Forrest and the assistant director is Professor Per K. Frolich.

For the past 17 years the laboratory has devoted a part of its time to the study of the rate of corrosion. The initial problems of this work were the formulating of the theory and mechanism of corrosion, for at that time very little fundamental work had been done on the subject. These investigations led to the publication of several articles and indirectly to several textbooks on the theory of corrosion which now serve as a basis for this phase of chemical engineering.

Effect of the constituents of steel on its corrosion was next studied. Other early investigations included methods for improving galvanizing and plating processes.

##### Now Testing Cast Iron Corrosion

Present investigation in the field of corrosion is that of the effect of Cambridge water on cast iron pipe. This problem directly affects many manufacturing and public utility companies in this vicinity. Samples of cast iron pipe are taken from foundries in all parts of the country, chemically analyzed, and placed on corrosion test. The effect of foundry practice and of silicon and sulfur constituents in the material on the rate of corrosion are particularly under observation.

Of great value to an entire industry were the recently completed corrosion tests on refrigeration systems. These investigations have resulted in a large reduction of the corrosion in the mechanism.

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### COMMITTEE GETS PROFESSIONALS' CARNIVAL TENTS

#### Clean Humor Is Voo Doo Feature In Purity Issue

Institute Committee, THE TECH, Harvard, and Spring All Furnish Laughs

"My strength is as the strength of ten, because my heart is pure" seems to be the maxim of the "Purity Number" of Voo Doo, which goes on the stands today. A colorful picture of one of Sir Galahad's contemporaries on the front cover carries out the motif. Although its new raiment is far from sensational, its quality is excellent.

A demure and much-clothed young lady standing on a cake of Ivory soap invitingly summons the readers on to the mysteries beyond, which includes stories of heaven, of Harvard, and of the Institute Committee, not to mention THE TECH. The art work is very good, and the number of jokes without a point is as low as could be expected.

The influence of spring has worked its dastardly influence on one hopeful contributor, who bursts forth in unrestrained verse on this subject, not forgetting sulfur and molasses and spring cleaning orgies. One decidedly helpful feature is a directory of summer camps par excellence, and also an employment bureau for those receiving Vote 12. Altogether, this number is well worth reading, and holds its head high among college humorous publications.

#### CHEMISTS WILL HEAR "STORY OF ASBESTOS"

Gerald W. Blakely '14, to Give  
Lecture Before Society

At a special meeting of the M. I. T. Chemical Society which will be held in the North Hall of Walker Memorial, Wednesday evening at 7:30 o'clock, a two reel film on "The Story of Asbestos" will be shown by L. E. Cushman of the Johns-Manville, Inc. This will be accompanied by a talk on asbestos by Gerald W. Blakely '14, technical expert of the company. Asbestos products from the crude to the finished materials will be on display. Everyone is invited to attend the meeting.

This film is of more than ordinary local interest because a great deal of the development of asbestos products has been done in connection with the Institute for a long time. For nearly twenty years Professor Charles L. Norton of the Physics Department has been interested in the manufacture of materials of this sort, and has been associated with the actual manufacture of these products. The first asbestos shingles and boards, such as manufactured by the Johns-Manville Company, were made in the laboratories of Technology by Professor Norton and his assistants, and many of the other uses to which asbestos has been put were developed in the same way.

#### COPITHORNE TO READ MASEFIELD'S WORKS

As the last of his readings from the works of famous authors for this semester, Professor Matthew R. Copithorne of the English Department will offer a group of selections from the works of John Masefield. This reading will be held in the library of Walker Memorial at 5 o'clock this afternoon. These readings have been given on Monday afternoons throughout the term as a memorial to William Eastman Jr. '17.

#### SIDE SHOWS, CANE RACKS, AND MONEY WHEELS PROVIDED

Ferris Wheel, Merry-Go-Round Provided for Amusement Of the Freshmen

#### 30,000 TICKETS PRINTED

From advanced information which leaked out from the plans of the All-Technology Carnival Committee it was learned last night that final arrangements have been made by M. Richard Boyer, '29, chairman of the committee, for the use of all the equipment of an old carnival company which was stranded in Boston last summer. All the attractions which were in the regular carnival will be set up and running on the night of April 12 when the All-Technology Carnival gets under way. Sledge hammer ringers which will test the boys' strength will be running along with money wheels, cane racks, and side shows. Even the tents of the stranded company will be set up in the Armory.

Measurements are being made of the doors at the Armory to find an opening through which the ferris wheel and merry-go-round will pass. The committee is now considering the difficulties of transportation and construction, realizing that to set up all their equipment in one day will be quite a task. Special care will be taken to put up substantial stands for the various exhibits. With the regular carnival equipment it is hoped to make the affair more of a success than in previous years with the improvised imitations. All construction is to be done by carnival workers who are familiar with that type of work.

**Tickets Are Printed**  
The tickets have been printed and received from the press. The committee expects a record breaking crowd in attendance and has taken the precaution of printing 30,000 tickets. The tickets are a standard theatrical type, yellow in color with five cents printed in red across the face. These will be sold on the carnival lot only at booths to be operated by the committee. They will be sold in strips to the students who will present them to  
(Continued on Page 4)

#### PLANS FOR RUSHING TO BE CONSIDERED

At a meeting of the Interfraternity Conference held last week it was decided to appoint a committee to investigate the advisability of a rushing plan to be used next year. John D. McCaskey '29, chairman of the committee selected Phietaus H. Holt '30, Edwir V. Ware '29, and Ralph B. Atkinson '29, to assist him. The committee will look into the advisability of having definite rules for rushing next year and will investigate the methods used at other colleges to control the fraternities during this season. A report will be made at the next meeting of the Conference, April 9.

#### T.C.A. BOYS' WORK LEADER HERE TODAY

Mr. Duncan Russel who is leading the boys' work of Boston, is coming to the office of the T. C. A. to discuss the problems of the 26 Technology students who have spent some of their time in boy scout working and leading young boys in their activities. The meeting will be at 5 o'clock today and the members of the freshman cabinet and those who have been doing the boys' work should be present.

**NOTICES and ANNOUNCEMENTS**

**Of General Interest**

**The Helium Spectrum** Prof. W. Heisenberg  
Friday, March 22, 4 P.M., Room 10-250

Professor W. Heisenberg, Director of the Institute of Theoretical Physics of the University of Leipzig, will give the fourth lecture in the series on "Recent Developments in Quantum Mechanics". The subject of the lecture will be "The Helium Spectrum".  
The lecture is open to students and members of the instructing staff.

**Hydraulic Experimentation** Dr. Ing. Theodor Rehbock  
Friday, March 22, 2 P.M., Room 5-330

Dr. Ing. Theodor Rehbock, Professor of Hydraulics at the Technische Hochschule of Karlsruhe, Germany, will deliver a series of lectures on "Hydraulic Experimentation". The second lecture will be on "Water Movement: Lamina Turbulent and Shooting Flow" and "Water Currents and Hydraulic Rollers". The lectures will be illustrated by moving and still pictures.  
The lecture is open to students and members of the instructing staff.

**Evolution** Prof. Kirtley F. Mather  
Saturday, March 23, 9 and 12 o'clock, Room 5-330

Professor Kirtley F. Mather of Harvard will speak on "Evolution" at the lecture hour in English and History E22.  
The lecture is open to students and members of the instructing staff.

**Meetings of Eastern College Personnel Officers**  
Friday, March 22 and Saturday, March 23

Group Discussion Meetings on Personnel Problems. Full information regarding topics, time and place of meetings may be had at the Personnel Office or the Undergraduate Employment Bureau.

The meetings are open to students and members of the instructing staff who are interested.

**Poetry Reading** Professor M. R. Copithorne  
Monday, March 24, 5 P.M., Walker Library

Professor M. R. Copithorne of the English Department will present the last of his series of poetry readings. Selections from the works of John Masefield will be the subject.  
Students and members of the instructing staff are invited to attend.

**Calendar**

Friday, March 22

3:00—A. I. E. E. Open Discussion Meeting, Room 10-275.  
4:00—Fourth Lecture on Quantum Theory by Professor Werner Heisenberg, Room 10-250.  
5:00—Freshman Rules Committee Meeting, West Lounge, Walker, Saturday, March 23.

Saturday, March 23

2:00—Lacrosse Team practice, Tech Field.  
Rifle meet, Varsity vs. Navy at Annapolis.  
Eastern Intercollegiate Gym League Championship Meet, at University of Pennsylvania.

Monday, March 25

5:00—M. I. T. A. A. Meeting, Committee Room, Walker.  
6:00—Alumni Council Dinner Meeting, Faculty Dining Room, Walker.

Tuesday, March 26

5:00—Banjo Club Meeting, East Lounge, Walker.  
5:00—Glee Club Meeting, Room 10-250.

Wednesday, March 27

7:00—Chemical Society Smoker, North Hall, Walker.

Thursday, March 28

5:00—Banjo Club Meeting, East Lounge, Walker.  
6:00—Italian Club Smoker, Faculty Dining Room, Walker.  
7:30—VI-A Smoker, North Hall, Walker.

Saturday, March 30

5:00—Banjo Club Meeting, East Lounge, Walker.

Monday, April 1

5:00—M. I. T. A. A. Meeting, Committee Room, Walker.

Tuesday, April 2

5:00—Banjo Club Meeting, East Lounge, Walker.  
5:00—Glee Club Meeting, Room 10-250.

Wednesday, April 3

7:30—Chemical Society Smoker, North Hall, Walker.

Friday, April 5

9:00—Freshman Promenade, Hotel Somerset.  
8:30—Dorm Dance, Walker.

**Undergraduate**

**SENIOR ENDOWMENT**

Information on the Senior Endowment plan can be secured in Room 3-213 at any time.

**SENIOR WEEK COMMITTEE**

There will be a meeting of the Executive Committee of the Senior Week Committee in the Executive Committee Office 5 o'clock today.

**SENIORS**

A representative of the General Railway Signal Company of Rochester, N. Y. will be at the Institute today to interview Seniors who are interested in electrical signal work. Candidates should schedule an appointment in the Personnel Office, Room 3-212.

**H. M. LANE DOES TELEVISION WORK**

**Extreme Frequencies Present Many Difficulties in Operation**

(Continued from Page 1)

mission the unsolved problems relate to specific parts of the apparatus which give unsatisfactory performance. Synchronizing and monitoring of the scanning disk is still imperfect. High amplification with no distortion has not been satisfactorily accomplished. Much refinement and "fool-proofing" is necessary. Some of these problems are being investigated at the Institute by Mr. Henry M. Lane, instructor in electrical engineering. The greater part of the experiments have been in reference to the development of high-gain amplifiers of uniform amplification characteristics. This is difficult because of the wide range of frequencies that must be used in television transmission and the disastrous effect of the slightest distortion of the incoming signal.

**M.I.T. Television Research**

A complete transmitting and receiving apparatus has been built by Mr. Lane. The output of the transmitter is coupled directly to the receiver to eliminate as far as possible all variations from other sources while studying the amplifier. The set-up is so arranged that the experimenter serves as the subject being televised while viewing the received image.

Much experimenting was necessary in constructing the outfit in order to secure a stable transmitter and power supply. Since this has been completed research is now almost entirely confined to the development of amplifiers. Several have been designed, the one under investigation at present consisting of four stages of resistance coupled high mu tubes and two stages low mu, giving an amplification of one million times. Plans are being completed for a circuit utilizing the Western Electric tubes used in Vitaphone installations. Measurement and comparison of the various amplifiers is accomplished by observation of the received image and by electrical computations.

**CARNIVAL COMMITTEE CONSIDERS PROTEST**

At a meeting of the Carnival Committee last evening in Walker Memorial a formal protest was entered in the form of a letter written to the Committee by T. E. N. claiming that this former organization and not THE TECH, should be allowed to operate a bar individually at the coming Carnival, for the following reasons: first, that in past years T. E. N. has run the bar in connection with THE TECH, secondly that the bar was originally the idea of the T. E. N. management, and thirdly that in previous years, when the bar had been managed mainly by THE TECH the bar had not been satisfactorily conducted. The Carnival Committee has taken this matter under advisement, and will decide the point at a meeting next Friday evening.

**THETA CHI BOWLERS WIN CHAMPIONSHIP**

In a match for the interfraternity bowling championship held last Wednesday night at the Fenway Alleys, between two four men teams representing Theta Chi Fraternity and Phi Mu Delta, Theta Chi came out on top, outscoring their opponents by three to one. After taking the first string, Phi Mu Delta was decisively beaten in the second and barely lost the third, the total being 1084 to 987 in favor of Theta Chi.

**UNDERGRADUATE**

All lacrosse candidates should obtain lockers in the Track House or Hangar Gym and report for practice at Tech Field tomorrow at 2 o'clock.

**SENIORS**

A representative of the Nash Motor Company of Milwaukee will be at the Institute this afternoon to interview Seniors. Students who are interested should schedule an appointment in the Personnel Office, Room 3-212.

**ENJOY THE SPRING SOCIAL SEASON**

In the Best Cars at the Lowest Rates

**U-DRYVIT AUTO RENTAL**  
6 Belvidere Street Boston

**New Voo Doo Clothed in Virgin Innocence**

With the idea of giving the students of the Institute something novel, Phosphorous has announced that the "Purity Number" of Voo Doo will be on sale Monday. The Voo Doo Summer Camp Guide, the suggestion of a sorority for the co-eds of Technology, a take-off on Philo Vance and the great mysteries which he is called upon to solve, a full page cartoon of life in the big shops where graduates of the Institute often find themselves, some jokes of a tone somewhat different than have been appearing in this magazine, and the usual number of age old puns constitute this issue.

**GLEE CLUB PRESENTS CONCERT NEXT WEEK**

With the rehearsal held yesterday afternoon at Jordan Hall, the Technology Glee Club practically completed its preparations for the concert to be given in combination with the McDowell Club at Jordan Hall next Wednesday afternoon. The concert will be under the direction of Mr. William Ellis Weston, coach of the Glee Club and of the McDowell Club. An extra rehearsal of the Technology Club will be held Monday afternoon in Room 2-190 at five o'clock. Tickets for the concert have been given to each member of the Clubs, and although there are none for sale, seats may be secured at three o'clock on Wednesday when the concert is to be given.

Among the numbers which the Glee Club will render with the McDowell Club are, Eranc's 150th Psalm, Von Holst's Psalm XCIII and Jerusalem. They will also sing Ave Verum by Mozart, the number the Club sang in the Intercollegiate contest.

**FRESHMEN TO HOLD DANCE AT SOMERSET**

Arrangements for the Freshman Promenade, the chief social event of the year for the class of 1932, have been made by the freshman dance committee. The dance will take place at Hotel Somerset on the evening of Friday, April 5, featuring Leo Reisman's Orchestra.

In order to prevent "crashing" at the dance, the Newbury St. entrance of the hotel has been reserved by the dance committee for exclusive use during the evening by patrons of the affair. The tickets will be sold at \$2.50 per couple or stag, and will be available beginning next Monday either in the main lobby and at the Rogers Building, or from any freshman officer or member of the dance committee.

Freshmen who are unable to obtain partners for the dance will be accommodated, upon request, by the committee in charge. In the words of one of the committeemen, "It is expected that the freshman class, the only one in twelve years to capture Field Day, will continue to show its preeminence by making its largest social affair an unusual success through hearty patronage".

**S.A.E. WILL HEAR MR. JOHN F. DUBY**

Mr. John F. Duby, of the J. F. Duby Co., manufacturers of wheel-aligning instruments, has consented to speak before the Society of Automotive Engineers on the ever-present and perplexing question of wheel alignment on automobiles. The address will be given in Room 3-270 at three o'clock this afternoon. He will explain the geometry of steering problems and what the effect of the necessary compromises are caster, camber, and toe-in will be discussed with relation to their shimmying. After the address Mr. Duby will answer any questions the students may have in regard to the subject.

**GREAT REVIVALIST THRILLS AUDIENCE**

(Continued from Page 1)

assumes devotion toward God. The speaker admitted that if he couldn't pray he would go wrong in ten minutes.

One of his many illustrations of the influence of his talks on people was the example of a student at Cambridge, England who had his wall covered with pictures and drawings that "his mother shouldn't see." A friend of this fellow put a crucifix on the wall and by the influence of the friend's contribution the wall was soon cleared of its abhorrence.

"He is not a man who sneers at another" was the opinion of the speaker when he tried to convince the audience that under no condition should one ever try to rob another of his purity. In regard to this policy the speaker gave examples of men with whom he had come in contact who had misled others and repented it on their death bed.

Maternal love and its influence on boys who are or have gone wrong was revived many times by the influence of the speaker. He encouraged those who are away from home to write more often and cheer their mothers by fond devotion.

The T. C. A. secured the speaker after being once refused, due to his avalanche of invitations to speak at various places. The T. C. A. committee then exerted their efforts toward showing him that his visit here would be well received. The crowd in Room 10-250 proved the fact and showed how the speaker could draw immense crowds wherever he went.

**THE REPERTORY**  
Back Bay 7000  
Even. 8:15.  
Mats. Thurs., Sat. 2:15  
Last 5 Times of THE  
**NEW HENRIETTA**

Seats: Filene, Jordan, Shepard, Gilchrist

**For College Parties**

—small or large, The Modernistic Ballroom, for 300 guests. The Sun Room—accommodates 100. The Jewel Room—for 50 to 75, may be opened into the EGYPTIAN ROOM for dancing to Leo Reisman's music.

Call or write

**Hotel BRUNSWICK**  
for particulars

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**SIMPLEX WIRE & CABLE CO**

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JACKSONVILLE

**NOTICE TO Seniors and Graduate Students**

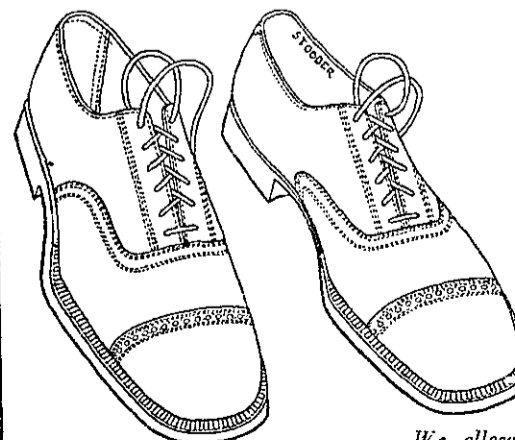
OF ALL COURSES

Appointments for Interviews with

**Bell System Representatives**

May be made March 20 to 23 inclusive in Room 3-209

**NEW SHOES for SPRING**



We have taken our most popular and outstanding young man's \$11.00 oxford of the past season as a model and have turned out a beautiful light weight shoe for spring which is pre-eminently smart and high grade.

They are executed in a new rich shade of tan, and in fine velvety black calfskin.

Special values—Specially priced.

Style 966 Black \$10.00  
Style 967 Tan

We allow a special 12 1/2% discount to Tech Students on all cash sales at our list prices

**COED-STODDER**  
12 1/2% DISCOUNT

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### FIRSTS ARE ONLY SCORING PLACES IN TOURNAMENT

Reynolds Takes Championship on Rings While Wells Wins on Horizontal

### WIN SECOND IN TUMBLING

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#### STRING QUARTET AND PIANOFORTE

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## Problems of Industrial Chemistry Being Investigated at Institute

### Laboratory of Applied Chemistry Making Contributions to Many Industries

(This is the third of a series of features articles describing the work progressing in the many interesting laboratories and experiment stations in the Institute. Watch for more of these—learn to know Technology.)

Research problems of considerable industrial importance are being worked on in the Research Laboratory of Applied Chemistry. Many chemical industries, manufacturing concerns, and trade associations make use of the facilities of this laboratory by a co-operative arrangement for the solution of the more fundamental types of problems of industrial chemistry. Such close contact with industry has greatly aided the laboratory in accomplishing its primary aim which is the training of men in methods of industrial research.

Organized in 1908 under Dr. William H. Walker to carry on research in technical chemistry, this laboratory has grown, become a part of the later organized Department of Chemical Engineering, and at present has a staff of six research associates and twenty-nine research assistants. The director is now Professor Henry O. Forrest and the assistant director is Professor Per K. Frolich.

For the past 17 years the laboratory has devoted a part of its time to the study of the rate of corrosion. The initial problems of this work were the formulating of the theory and mechanism of corrosion, for at that time very little fundamental work had been done on the subject. These investigations led to the publication of several articles and indirectly to several textbooks on the theory of corrosion which now serve as a basis for this phase of chemical engineering.

Effect of the constituents of steel on its corrosion was next studied. Other early investigations included methods for improving galvanizing and plating processes.

#### Now Testing Cast Iron Corrosion

Present investigation in the field of corrosion is that of the effect of Cambridge water on cast iron pipe. This problem directly affects many manufacturing and public utility companies in this vicinity. Samples of cast iron pipe are taken from foundries in all parts of the country, chemically analyzed, and placed on corrosion test. The effect of foundry practice and of silicon and sulfur constituents in the material on the rate of corrosion are particularly under observation.

Of great value to an entire industry were the recently completed corrosion tests on refrigeration systems. These investigations have resulted in a large reduction of the corrosion in the mech-

(Continued on Page 4)

## COMMITTEE GETS PROFESSIONALS' CARNIVAL TENTS

### Clean Humor Is Voo Doo Feature In Purity Issue

Institute Committee, THE TECH, Harvard, and Spring All Furnish Laughs

"My strength is as the strength of ten, because my heart is pure" seems to be the maxim of the "Purity Number" of Voo Doo, which goes on the stands today. A colorful picture of one of Sir Galahad's contemporaries on the front cover carries out the motif. Although its new raiment is far from sensational, its quality is excellent.

A demure and much-clothed young lady standing on a cake of Ivory soap invitingly summons the readers on to the mysteries beyond, which includes stories of heaven, of Harvard, and of the Institute Committee, not to mention THE TECH. The art work is very good, and the number of jokes without a point is as low as could be expected.

The influence of spring has worked its dastardly influence on one hopeful contributor, who bursts forth in unrestrained verse on this subject, not forgetting sulfur and molasses and spring cleaning orgies. One decidedly helpful feature is a directory of summer camps par excellence, and also an employment bureau for those receiving Vote 12. Altogether, this number is well worth reading, and holds its head high among college humorous publications.

### CHEMISTS WILL HEAR "STORY OF ASBESTOS"

Gerald W. Blakely '14, to Give  
Lecture Before Society

At a special meeting of the M. I. T. Chemical Society which will be held in the North Hall of Walker Memorial, Wednesday evening at 7:30 o'clock, a two reel film on "The Story of Asbestos" will be shown by L. E. Cushman of the Johns-Manville, Inc. This will be accompanied by a talk on asbestos by Gerald W. Blakely '14, technical expert of the company. Asbestos products from the crude to the finished materials will be on display. Everyone is invited to attend the meeting.

This film is of more than ordinary local interest because a great deal of the development of asbestos products has been done in connection with the Institute for a long time. For nearly twenty years Professor Charles L. Norton of the Physics Department has been interested in the manufacture of materials of this sort, and has been associated with the actual manufacture of these products. The first asbestos shingles and boards, such as manufactured by the Johns-Manville Company, were made in the laboratories of Technology by Professor Norton and his assistants, and many of the other uses to which asbestos has been put were developed in the same way.

### COPITHORNE TO READ MASEFIELD'S WORKS

As the last of his readings from the works of famous authors for this semester, Professor Matthew R. Copithorne of the English Department will offer a group of selections from the works of John Masefield. This reading will be held in the library of Walker Memorial at 5 o'clock this afternoon. These readings have been given on Monday afternoons throughout the term as a memorial to William Eastman Jr. '17.

### SIDE SHOWS, CANE RACKS, AND MONEY WHEELS PROVIDED

Ferris Wheel, Merry-Go-Round Provided for Amusement Of the Freshmen

#### 30,000 TICKETS PRINTED

From advanced information which leaked out from the plans of the All-Technology Carnival Committee it was learned last night that final arrangements have been made by M. Richard Boyer, '29, chairman of the committee, for the use of all the equipment of an old carnival company which was stranded in Boston last summer. All the attractions which were in the regular carnival will be set up and running on the night of April 12 when the All-Technology Carnival gets under way. Sledge hammer ringers which will test the boys' strength will be running along with money wheels, cane racks, and side shows. Even the tents of the stranded company will be set up in the Armory.

Measurements are being made of the doors at the Armory to find an opening through which the ferris wheel and merry-go-round will pass. The committee is now considering the difficulties of transportation and construction, realizing that to set up all their equipment in one day will be quite a task. Special care will be taken to put up substantial stands for the various exhibits. With the regular carnival equipment it is hoped to make the affair more of a success than in previous years with the improvised imitations. All construction is to be done by carnival workers who are familiar with that type of work.

#### Tickets Are Printed

The tickets have been printed and received from the press. The committee expects a record breaking crowd in attendance and has taken the precaution of printing 30,000 tickets. The tickets are a standard theatrical type, yellow in color with five cents printed in red across the face. These will be sold on the carnival lot only at booths to be operated by the committee. They will be sold in strips to the students who will present them to

(Continued on Page 4)

### PLANS FOR RUSHING TO BE CONSIDERED

At a meeting of the Interfraternity Conference held last week it was decided to appoint a committee to investigate the advisability of a rushing plan to be used next year. John D. McCaskey '29, chairman of the committee selected Philetus H. Holt '30, Edwin V. Ware '29, and Ralph B. Atkinson '29, to assist him. The committee will look into the advisability of having definite rules for rushing next year and will investigate the methods used at other colleges to control the fraternities during this season. A report will be made at the next meeting of the Conference, April 9.

### T.C.A. BOYS' WORK LEADER HERE TODAY

Mr. Duncan Russel who is leading the boys' work of Boston, is coming to the office of the T. C. A. to discuss the problems of the 26 Technology students who have spent some of their time in boy scout working and leading young boys in their activities. The meeting will be at 5 o'clock today and the members of the freshman cabinet and those who have been doing the boys' work should be present.

A Record of Continuous News Service for 48 years.



Official News Organ of the Undergraduates of M. I. T.

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In charge of this issue: J. W. Bahr '31

OUT OF THE BAG AGAIN

"PHOSPHORUS", the "Voo Doo's" famed mascot, never stays away for long. Today he got out again, bringing with him the "Purity Number". It is the new managing board's first effort, and has been produced with a full sense of the editor's accountability to the new policy.

It is a decided change from the "Back Bay Number", which recently caused such a commotion at the Institute. As an example of what may be done without "hitting below the belt", it is a good effort. The material has been confined to the Institute, giving the magazine that local color which was asked for after the last issue. Jokes, puns and clever sallies are made at the expense of the Institute Committee, Liberal Club, and Technology student and faculty celebrities.

Again, however, we find the inevitable—along with that sure source of space filler, the Harvard man, comes "Voo Doo's" comment on THE TECH. Well, why not? They seem to enjoy this sort of innocent fun, so what harm is there in the editors' indulging in it? Much better those jokes than some of the questionable humor one often reads, for this section is at times even funny.

"Voo Doo" explained that their last number came in response to student demand for such an issue. This number has all the humor, without the dirt. The board has brought forth something which does credit to the school, and we hope that it presages the continuance of the new policy.

During the recent investigation of the comic monthly, the students at Technology were sent a questionnaire, asking if they approved of "Voo Doo's" continuing as an undergraduate publication. The vote in every case was overwhelmingly affirmative—in fact eight-five percent of the whole student body would not think of Technology without the comic's humor. Such talk is free, but even "Voo Doo" only costs a quarter.

SPEAK UP

WHENEVER a professor completes a long discussion on a certain type of problem or some particular theory he almost always pauses for questions. Often he is asked a few, often he is not asked any. In an ordinary classroom when he is not asked questions at the conclusion of the explanation the professor is likely to feel that something is wrong. He perhaps wonders if he did not make the matter sufficiently clear to prompt questions. For the professor realizes that American students are, as a body, not given to accepting statements or theories without first dragging them over the fires and testing them in every way, questioning the ability of the very foundation itself to support the theory.

Perhaps once in a while the professor does fail to get enough of the subject across to arouse interest and raise questions, but in general it is not the lack of this "getting it across", nor is it the ready acceptance of the students that causes the hollow silence that prevails when questions are requested. The explanation lies elsewhere.

It isn't shyness, for Technology students in the aggregate are not shy. It could not be termed complete indifference. Often the student will think to himself concerning the question which is in the back of his mind unanswered, "Oh, well—why bother, I'll see it when I read the book." Sometimes this will be true, and often it is not. The student who leaves a classroom knowing that he does not understand a point just explained is not being fair either to himself or to his professor. Perhaps the student thinks that his question is too trivial to bother with, perhaps he considers it a bad policy to ask questions which will tend to display his limited knowledge of the subject at hand. In either case he is wrong. A solution is only as good as the question which it satisfies.

As We See the Movies

METROPOLITAN

Every moving-picture produced nowadays is a "First" of some sort or other—"the first all-talking detective story," "the first outdoor talking picture" and so on ad nauseam. This week's attraction at the Met is advertised as the "first musical film-romance" ever produced. Though we fail to see whence this distinction came, we hope there are more like it, for "The Wolf Song" is a good effort.

Lupe Velez, the fiery passionate Spanish lady who has recently taken the movies by storm, stars in this romance of the old Southwest. The man who first wrote, "Her bosom heaved with emotion" must have known Miss Velez' grandmother, and how the young woman has improved since that time! Why Gary Cooper who plays opposite her, ever thought of going back to the mountains it is impossible to see.

Mr. Cooper is a big, handsome Kentuckian who goes West to seek his fortune, which was quite the thing to do in the old days. He meets the prize senorita of one of the Spanish settlements, and amid much excitement, takes her away with him, nearly causing another Spanish Inquisition headed by the father. The subsequent marriage does not end the picture, for Gary must have his mountain freedom. He gets that, and the much more fast action before the "gate," as it were, as well. There is a final fade-out, which is quite satisfactory to all concerned, including the audience.

Dave Rubinoff, well-known orchestra conductor and an artist who makes a violin speak for itself, is guest conductor of the orchestra this week. Under his direction, the orchestra forms a pleasing background for the stage show, "Laces and Graces." The scenes in this show, particularly the finale, almost rival musical comedy in their extravagance and beauty. Fortunello and Cirilino give a tumbling act which is much appreciated. The harmonious Tommy Atkins Sextet, with Nell O'Day, a piquant blonde, sing several numbers in good style. A local physician, Dr. Richard A. Lynch, wrote the words and music for Arthur Martel's feature offering on the organ, "All I Need Is You." Personally, we think it needs more than that.

If you are one of those addicted to taking the girl friend to the Met now and then, this is a good week to do it. Jordan Marsh is staging a Style Show, and the young lady may enjoy it. To the men, it seems that the models are hardly professional.

Away from the Grind

Two dances and the Beaver Club initiation were the entertainment highlights of last week, Delta Tau Delta opening its doors on Friday night, and Theta Chi on Saturday. Both affairs were featured by good orchestras and both were very successful from the entertainment point of view.

BEAVER CLUB

The annual initiation of the Beaver Club was held last Friday evening at the Hotel Westminster. All active members were there as well as a number of the present Seniors. Including the initiates the total number at the affair was about forty.

A banquet was held before the initiation for all the old members. The initiates, being left out, satisfied their hunger at Walton's. Retaliations for this neglect was forthcoming, however, for when the new members put on a playlet for the amusement of their peers they chose to present such a crude and revolting burlesque that it was the older members who sought mercy.

DELTA TAU DELTA

Bob Whittemore and his orchestra furnished the music for the Delta Tau Delta open dance given Friday night. (Continued on Page 4)

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Scheme of Hexagonal Street Planning Being Tried Out in New Subdivisions

System Will Eliminate Traffic Congestion and Crowding of Residences

An interesting scheme of planning streets for newly laid out towns was outlined recently at a meeting of the Architectural Society of McGill University. Briefly, the idea is to lay out the streets on a hexagonal system. At intervals, say of a mile, there would be a network of main boulevards, which would be the sides of another, much larger hexagon.

The scheme has several advantages. It can be shown by figures that each house receives more light and air under it than under the present system, and as cities are becoming more and more crowded this is an item of no little importance. It lends itself admirably to the economics of central heating, central ash and garbage removal, etc. Its main claim to advance, however, lies in the benefits it offers to traffic. It eliminates both the awkward left hand turn, or perhaps one might say that it flattens them out until they lose most of their difficulty. Each intersection, as can be seen, will be a Y-shaped affair. The driver of a car coming down any

one arm will be able to see several hundred feet up each of the others while yet some distance from the corner, thus tending to greater safety and also to greater speed.

The one big objection of course, is that one can go in no direction in a straight line. It is true, however, that even under the present system one can only go in a few directions in a straight line, while all others are comparatively circuitous. Even this objection is taken care of by providing for the main boulevards mentioned before, and it seems that, once the public were educated to the new system, one could get to any given direction by covering less distance and probably in a shorter time. The practical difficulties seem to be mainly that of public ignorance, but more particularly that of cost, which would be prohibitive in most built-up cities. It would be an interesting experiment to try in new subdivisions, and in fact such a township is now being planned.

PLAY DIRECTORY

Tickets for all theatres may be bought at Box-Office Prices from the T.C.A., Walker Memorial.

Stage

- COLONIAL: "Billie".** Miss Polly Walker cavorts and sings in gay style, to the accompaniment of many catchy tunes.
- COPELEY: "The Ringer".** Deep mystery from the most prolific Edgar Wallace. Concerning various vengeance, threats and evil-doings.
- MAJESTIC: "The Skull".** Being many thrills, chills and alarums mixed with very little logic. Owing to ill-placed screams in this reviewer's ears during the final unraveling, he still would like to know who the Skull purported to be.
- PLYMOUTH: "Paolo and Francesca".** Jane Cowl acting with charm and understanding in a rare revival of the Stephen Phillip piece.
- SHUBERT: "Manhattan Mary".** Final week of Ed Wynn and the usual elaborate production of Mr. George White. Competent cast including a most gentle looking work-horse.
- ST. JAMES: "The White Sister".** Revival of the familiar moving picture which was adapted from the novel by F. Marion Crawford. Considering her lover dead, enters a convent. The gentleman wasn't dead after all.
- WILBUR: "The Trial of Mary Dugan".** It takes much racking of brain to think of nice things to say about a piece that has run for ten weeks.

THE EDITORIAL SPECULUM

An edict recently issued by the president of the University of Detroit forbids the co-eds of the mid-western institution from conversing with the male students. If anyone of the 50 girls in the University of Detroit is caught talking to one of the 2000 men, her expulsion follows immediately.

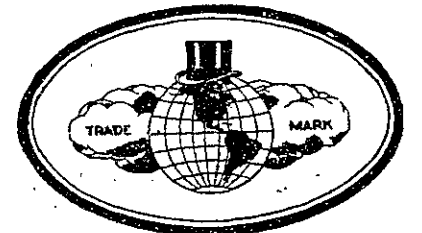
No longer may the male students receive a cheery feminine "Hello" to start the day. No longer may gay chats between classes lighten the drudgery of math and physics. No longer may suggestions and help decrease the feminine distaste of a messy chem lab experiment.

This announcement brings back visions of curfews, ankle-length skirts, and "full-dress" bathing suits. The Spectator thought these things were gone forever. Stupid restrictions are no longer tolerated by collegiate America. If the students of the University of Detroit bend to this suppression there is no danger of "our young America" doing anything radical in that vicinity.

The Spectator can assure our co-eds that no such blight will ever fall on them at Technology. Their presence and conversations are all too pleasant to do without.

Institute men are sometimes right in the answers they give on examination papers; they are often on the right side of the instructors; but they are never on the right side in the halls of the buildings. If these men drive cars as they walk, London is undoubtedly their home.

In many respects there is nothing more pathetic or amusing than a flurried student with a load of books that would give a horse the heaves, trying to make a class in Building one, from a class in Building Two. Then round a corner at top speed only to meet a flying comet in the shape of a duplicate flurried student on the left side, that is, the same side, as Student No. 1. Of course both tangle and books scoot helter-skelter, to be kicked by the thundering herd rushing on—etc. etc. ad infinitum. Why not a home project for the traffic engineer?



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WILL ADDRESS A MEETING ON

The R.O.T.C.—Is It a Menace?

TOMORROW AFTERNOON, MARCH 26 at four o'clock

THE RIVERBANK COURT HOTEL (Opposite Mass. Ave. entrance to M. I. T.)

Be There, to Support Whichever Side of the Question you Prefer, and to Express Your Opinion on Compulsory Military Training in Colleges

Due to the impracticability of securing a room in the Institute buildings, this meeting will be held in the Gray Room, 2nd floor of the Riverbank Court Hotel, on Mass. Ave., just opposite Mass. Ave., entrance to M. I. T.

This meeting announced under the auspices of the Fellowship of Youth for Peace.

# SPRING TRACK SEASON STARTS

## TRACK AND FIELD COACHES SPEAK AT BIG TRACK RALLY

"Three Days a Week" Attitude at Institute Berated by Coach Hedlund

### EIGHTY ATTEND MEETING

"Bill" Meanix Mentions Several Examples of Improvement in Past Season

Approximately eighty men attended the track rally held last Friday afternoon in the Hangar Gym. The meeting was called to promote further interest in the spring season of one of the major sports at Technology just before training starts in earnest. Talks were given to the candidates by Varsity Captain Hallahan, freshman Captain Gilman, Manager Alexander, Field Coach Meanix, and Track Coach Hedlund.

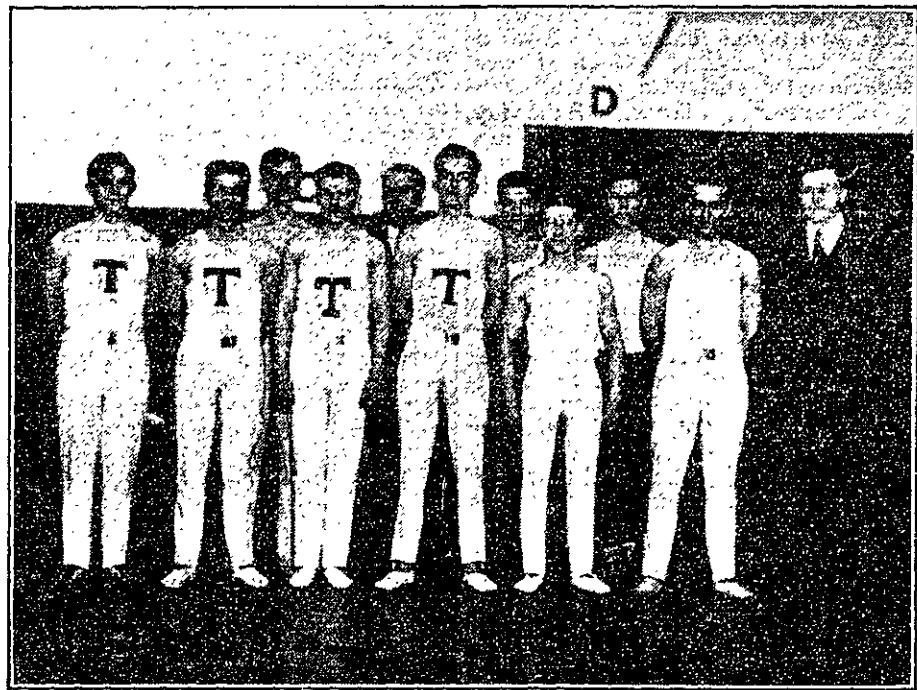
Manager Alexander opened the session with a short talk in which he pointed out the fact that more men developed after coming to the Institute than did before entering. He also said that the men experienced personal contacts through sports that were otherwise lacking and told of the benefits the men would gain from the physical exercise they receive. He then introduced the other speakers of the day as they came forward.

#### Captains Speak

Captains Hallahan and Gilman were the next speakers. They both gave a brief summary of the indoor season that has just closed, and then said a few words in regard to the coming spring schedule. They closed by reviewing the prospects of both the teams for the current season and told of the trips that would be taken.

Following the two captains, Field Coach "Bill" Meanix gave a short talk on the division of track that he coaches. Citing the example of three men who reported for practice in the shot put last fall, he said that they started by putting the twelve pound shot and are now putting the sixteen pound shot farther than they did the twelve pound when they first came out. Then he went on to say that those men who were in the habit of saying, "To H— with it" if they couldn't do a thing the first

## Gym Team That Tied Navy Last Saturday in Intercollegiate Contest



Front Row: Dolloff, Moore, Knapp, Fairchild, Reynolds, Fahenstock, Coach Hincks. Back Row: Couper, Manager MacLaren, Sidur, Platt.

time, would never get anywhere, but those who said, "Try again" were more likely to succeed. There is always someone who can give you a good race and there is always someone to whom you can do the same.

#### Hedlund Addresses Freshmen

The last speaker of the afternoon was Track Coach Oscar Hedlund. He told the men that he was going to speak especially to the freshmen, saying that they should not come out with the "three days a week, P. T. idea". That, he said, would complete their P. T. requirements but it would not make them lovers of track and good runners. He showed the men how the best runners that Technology has produced were men who had come out, not three times, but every day in the week. They built themselves up physically in this way and learned the real joy that comes with athletic accomplishments. Then he asked those men who could to bring out some of the men in their classes who would be interested in track, for he could not see them all himself and the cooperation would do much toward getting the men out who might be unwilling otherwise, because of the competition.

## Sports Desk

It is certainly a heart-warming sight to see the track men back on the outdoor track and the eight-oared shells gliding up and down the Basin. Not only does it herald the coming of spring with all its pleasant associations, but it also gives material demonstration of the real strength of M.I.T. in the athletic world. The followers of sports, encouraged by the wonderful records made by the Institute swimming, basketball, and gym teams, look forward with greatest optimism to the spring season.

The Varsity crew looks very good this year to those who know and follow the sport, and from the record of the track team during the past winter, nothing is too much to be expected of them. At this season of the year the interest in athletics reaches the greatest number of students at the Institute, and it is certain that the eyes of more and more each day are turning restlessly from drudgeries of books and boredom of movie houses to the field of sport. Welcome, Spring, and may you see the best season ever at M.I.T.

Interest in Lacrosse at the Institute is very high at present. It is one of the best games known for general recreation and development of physique and stamina. Though it is one of the most difficult games to master, it is welcomed by many ambitious men at M.I.T. With Lacrosse and Soccer practice under way, there is certainly sufficient occupation for those who like games of the sort.

From "The Campus", the newspaper at C. C. N. Y. comes the interesting information that ping-pong has gained a strong foothold there among the students. The tap of paddles on celluloid may be heard at any hour of the day, resounding through the halls of the college. The New York University "Daily News" has recently organized a ping-pong team and challenged the "Campus" to a match. The sporting world looks with interest on the outcome of this innovation and expects to see it spread throughout the collegiate world.

The track men at Ohio University are practicing for a new event known as the shuttle hurdle, which will take place on May 4 at the Ohio State relays. The field set-up consists of the usual 120-yard hurdle with two men at each end of the course. The lead-off men run their distance and tap their respective team-mates who reverse the field over the same course. This seems to be something new in track, and it may become a popular race among the colleges.

As evidence of the interest in Lacrosse at other colleges, there is an article in a recent issue of "The Stute" at Stevens Tech. Twenty-six men have reported at practice, many of them wearing towels about their heads in order to keep warm in the biting wind. The Varsity men are training faithfully and strenuously for the sport that requires the skill of a tennis player combined with the stamina of a cross-country runner. They run many laps on the track and wind up with a fast basketball scrim-

## Track Team Begins Spring Work Today

On Monday afternoon, the spring season in track will start in earnest at Technology. The board track has been abandoned for the turf now and it is hoped that the cinder track will soon soften up enough to be usable. Preparations are being made for the Spring Interclass meet to be held on April 13, the first of the spring meets. The schedule for the Varsity and freshman teams are as follows:

- VARSITY**  
 April 13—Interclass Meet.  
 20—Northeastern at M. I. T. (Practice Meet.)  
 27—Penn Relays at Philadelphia.  
 May 4—Cornell at Ithaca.  
 11—Maine at M. I. T.  
 18—New Hampshire at Durham.  
 25—New England at M. I. T.  
 June 1—I. C. A. A. at Philadelphia.  
**FRESHMAN**  
 April 13—Interclass Meet.  
 27—Andover at Andover.  
 May 3—Tufts '32 at M. I. T.  
 18—Holy Cross '32 at M. I. T.  
 25—New Hampshire '32 at Durham.

## GYMNASTS TIE FOR FIRST WITH NAVY

Reynolds and Wells Win Titles in Rings and Horizontal Bars for M.I.T.

(Continued from Page 1)

On the high bar Wells won from this man and on the rings Reynolds did the same thing. N. Y. U. has no gym team and hence Witzig has not complied with the ruling of the gym league which requires a man to have entered at least one meet during the year for his points to count. Stewart, of Dartmouth, the second place winner on the parallel bars was awarded the winner's prize in accordance with this ruling.

A summary of the meet follows:  
 Horizontal bar—Won by D. Wells, M.I.T., 557 points; second, T. E. Hughes, Navy, 550; third, S. B. Perreault, Navy, 539; fourth, A. E. Curcio, Army, 525.  
 Side horse—Won by P. M. Adamson, Navy, 594; second, P. Heller, Princeton, 560; third, A. P. Moore, M.I.T., 528; fourth, K. H. Witzig, N.Y.U., 511; fifth, D. F. Edwards, Princeton, 504.  
 Parallel bars—Won by J. H. Witzig, N.Y.U., 611; second, J. I. Stewart, Dartmouth, 584; third, C. G. Zey, Dartmouth, 565; fourth, P. H. Peirce, Princeton, 541; fifth, J. Mexico, Chicago Univ., 529.  
 Flying Rings—Won by W. H. Reynolds, M.I.T., 569; second, R. E. Lockwood, Navy, 566; third, C. G. Zey, Dartmouth, 553; fourth, W. B. Steiner, Navy, 542.  
 Tumbling—Won by Avery Gould, Dartmouth, 601; second, Nathan Dolloff, M.I.T., 583; third, Drum, Temple, 559; fourth, Poole, Army, 546.  
 Rope climbing—Won by Galbraith, Navy; second, Lofthouse, Princeton; third, McElroy, Navy; fourth, Charles Zey, Dartmouth. Time—4 4-5s.  
 All-around championship—Won by John Mexico, University of Chicago, 2567; second, Hughes, Navy, 2488; third, Poole, Army, 2378; fourth, Wells, M.I.T., 2328.

## OARSMEN WORKOUT IN NEW SHELL ON RIVER

Last Saturday afternoon, the Varsity oarsmen tried out the new shell after carrying it to the Weld boat-house from Davy's, well-known Cambridge boatbuilder. The shell was designed after one of the old Ward boats, now belonging to Technology, which was considered to have the best lines of any of the shells in the boathouse. The original shell was first owned by Syracuse, who sold it to Cornell, who later sold it to an industrial concern in Worcester. The shell was then purchased by Technology, and used by the Varsity for several years. In spite of its age, it is still used by the freshmen, and is still considered one of the best designed boats in the boathouse. After their workout in the new shell, the Varsity enthusiastically expressed their approval of the way in which the boat behaved on its first trial. Coach Bill Haines was also well pleased by the way the boat rides, and sets in the water. On the first trip, the oarsmen rowed up the river in fast time, and seemed to feel as if they had been rowing in it all season.

Lacrosse is very popular in that section of the country and the schools there develop some fine teams.

## Hedlund's Hurlers Clear the Barriers



## RIFLE TEAM LOSES TO G. W. U. AND NAVY

Technology Leads New England Teams in N. R. A. Matches

On their weekend trip the Varsity rifle team was defeated twice by their Southern hosts. On Friday evening they met the team from George Washington University, losing the match 1338 to 1327. Clark was the high man in this match with a score of 271. Saturday afternoon the team journeyed to Annapolis where they lost again 1375 to 1344 to the Navy, which is reputed to have one of the best squads in the country. Manager Orleman was the high scorer in this match firing a card of 272.

The party, consisting of the coach, Lieutenant Moore, and the team members, Clark, Hamilton, Loomis, Orleman, Plugge, Reddig, and Twarogowski, left Thursday evening for the matches. Though they did not fire in their usual form, the Navy lived completely up to its reputation. These are the first shoulder-to-shoulder matches that M.I.T. has lost this year.

#### Lead in N. E.

In the telegraphic matches during the past week the Varsity team defeated Princeton, B. U., and the U. of Maine, increasing their lead in the National Rifle Association league. In spite of the marked supremacy of the Navy in Collegiate circles in the East, M.I.T. is very sure of the championship in New England this year.

The individual scores in the weekend matches were as follows:  
 George Washington U. match; Clark 271, Twarogowski 270, Orleman 268, Hamilton 259, Reddig 259.  
 Navy match; Orleman 272, Twarogowski 271, Plugge 268, Clark 268, Reddig 264.

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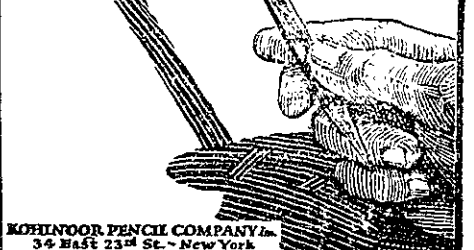
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## Walton Goes

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Bingham, Maine Jan. 31, 1928

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## NOTICES and ANNOUNCEMENTS

## Of General Interest

**The Spectra of Higher Atoms** Prof. W. Heisenberg  
Monday, March 25, 4 P.M., Room 4-270

Professor W. Heisenberg, Director of the Institute of Theoretical Physics of the University of Leipzig will give the fifth lecture in the series on "Recent Developments in Quantum Mechanics". The subject of the lecture will be "The Spectra of Higher Atoms".

The lecture is open to students and members of the instructing staff.

**Hydraulic Experimentation** Dr. Ing. Theodor Rehbock  
Tuesday, March 26, 2 P.M., Room 5-330

Dr. Ing. Theodor Rehbock, Professor of Hydraulics at the Technische Hochschule of Karlsruhe, Germany, will deliver a series of lectures on "Hydraulic Experimentation". The third lecture will be on "Water Movement: Lamina Turbulent and Shooting Flow" and "Water Currents and Hydraulic Rollers". The lectures will be illustrated by moving and still pictures.

The lecture is open to students and members of the instructing staff.

**Poetry Reading** Professor M. R. Copithorne  
Monday, March 25, 5 P.M., Walker Library

Professor M. R. Copithorne of the English Department will present the last of his series of poetry readings. Selections from the works of John Masefield will be the subject.

Students and members of the instructing staff are invited to attend.

## Calendar

Monday, March 25	
5:00—M. I. T. A. A. Meeting, Committee Room, Walker.	
6:00—Alumni Council Dinner Meeting, Faculty Dining Room, Walker.	
Tuesday, March 26	
5:00—Banjo Club Meeting, East Lounge, Walker.	
5:00—Glee Club Meeting, Room 10-250.	
Wednesday, March 27	
7:00—Chemical Society Smoker, North Hall, Walker.	
7:30—Dormitory Smoker, Prospect Hall, Cambridge.	
Thursday, March 28	
5:00—Banjo Club Meeting, East Lounge, Walker.	
6:00—Italian Club Smoker, Faculty Dining Room, Walker.	
7:30—VI-A Smoker, North Hall, Walker.	
Friday, March 29	
4:00—Tennis Team Meeting, Room 10-275.	
Saturday, March 30	
5:00—Banjo Club Meeting, East Lounge, Walker.	
Monday, April 1	
5:00—M. I. T. A. A. Meeting, Committee Room, Walker.	
Tuesday, April 2	
5:00—Banjo Club Meeting, East Lounge, Walker.	
5:00—Glee Club Meeting, Room 10-250.	
Wednesday, April 3	
7:30—Chemical Society Smoker, North Hall, Walker.	
Friday, April 5	
9:00—Freshman Promenade, Hotel Somerset.	
8:30—Dorm Dance, Walker.	

## Undergraduate

**SENIOR ENDOWMENT**  
Information on the Senior Endowment plan can be secured in Room 3-213 at any time.

**LACROSSE CANDIDATES**  
Sticks will be distributed to candidates in the Hangar Gym today at 5 o'clock. See Olmstead or Kocher as

**CAMP TECHNOLOGY IS TOPIC AT MEETING****Life at Camp to be Presented to New Civil Engineers**

A meeting of all men who are going to attend the Civil Engineering camp this summer will take place in Room 1-139 tomorrow afternoon at 2 o'clock. The purpose of the meeting is to give all the men an idea of what to expect when they get to the camp.

Life at Camp Technology is more than just surveying and field work. Athletics, dances, boating, swimming,

soon as possible as the number of sticks is limited and they will be distributed in order of application. Additional sticks have been ordered but there will be a short wait before they will be ready.

**LACROSSE**  
There will be a lacrosse practice today at 5 o'clock.

and bull sessions comprise an important part of camp life. Besides all this an important activity at the camp is the publication of the Annual Yearbook, which is called the Benchmark.

Student regulations are enforced by the student council which is an elective group. James G. Muir '30 who was the head of the '28 council will speak of this phase of the camp life. After him will come Robert A. Miller '30 and Ralph E. Scott '30 who will speak as representatives of last year's social committee. Athletics at the camp will be explained by Louis G. LaPointe.

After that part of the camp life has been discussed, Cyril R. Harding '30, and Sears L. Hallett '29 will speak for the Benchmark. At the same time a call will be made for candidates to the staff of the '29 Benchmark. Invariably those men who show enough interest and come out early will secure staff positions on the Annual.

**BAR AT CARNIVAL TO BE RUN BY THE TECH**

(Continued from Page 1)

the various amusements. All exhibits will cost five cents and no cash will be taken across the counters. This will eliminate the bother of change making on the part of the organizations running the booths and will allow the board to have a complete check on the receipts to each booth.

**THE TECH To Run Bar**

At a meeting of the committee Friday afternoon, it was decided that THE TECH would be given the right to operate a bar. In compensation for this T. E. N. who disputed THE TECH's right to the bar has been awarded a special exhibit which the committee had planned to run. This is to be in the nature of a surprise but it has been learned that in all probability it will consist of some kind of a girl show with imported women.

## Rogers Notes

It has happened again. Yesterday afternoon the Judging Committee for the Open House Poster Competition met in the exhibition room to select the prize winning designs out of an assemblage of over sixty renderings and interpretations which made the wall they adorned dizzy with a maze of black and white, purple and green, orange and blue. The required wording of the posters, "Open House, Massachusetts Institute of Technology, Cambridge, Mass., Saturday, April 27" peeked out from obscure corners in some, glared wildly about from the center of the poster in others, and in still others, spoke forth with dignity from a well chosen location. And those drawings which riveted one's eye to each poster in a different manner! Renderings of Technology's Administrative Building, dynamos, open doors, and lighter torches shone out prominently.

From this puzzle of posters Prof. J. B. Babcock, '10, Prof. William Emerson, and Prof. Harry W. Gardner '94, the jury, picked eight or nine of the best ones for final consideration and in the next issue you shall know the winner's name. What happened again was this: the architects monopolized honors in this poster contest as they have become accustomed to doing. Now, if any engineer has a special grudge against architects in general, and has a special craving to work off his grievance in the most effective manner possible, he should enter the very next poster competition. This in itself lowers the architects' pride. But, if, in addition, an engineer should capture one of the smaller prizes, extreme rage would afflict the Rogers colony. Finally, if an engineer, by any hook or crook, should run away with the coveted first prize, there would occur such an epidemic of suicide on Boylston Street that the architectural fraternity of Tech would disappear from the face of the earth. We trust therefore that many, many engineers will submit half a dozen or more poster designs at the earliest opportunity, and why not?

Well, well, the engineers—five of them—actually got up their dander enough to enter the Open House Poster Contest which ended recently. Out of the fifty-four designs submitted there were five from this side of the river. In the nine which were selected for final consideration from those fifty-four posters every one was drawn by the hand of an architect. However, that is not a poor start at all for engineer competition in these poster contests.

When we asked some of the architects if any drawings were entered from the engineering students they were mortified that we should put such lowly thoughts in their heads. Therefore, when we inquired whether any of those in the final examination had been composed by engineers we were already running out of the door of the exhibition room, where the posters were on display, because we could see the light of insane anger glittering in the architects' eyes.

All that engineers need to do now is to gain an honorable mention in the next competition in order to continue the torture of the architectural fraternity. The possibilities of taking a prize are too far off in the future to be given consideration at present, but we can at least creep up gradually in the race until first prize of fifteen or twenty-five dollars eventually goes to an engineer.

Oxford observes three terms. College opens some time in October for a period of eight weeks. Then there is a vacation of six weeks at Christmas. Another eight weeks and a six weeks' vacation at Easter. Then a final term of eight weeks and summer vacation of three months. Little stress is placed on lectures; the far-famed tutorial system is in vogue, and grading is almost entirely on examinations coming at the end of two or three years of work.

## Away from the Grind

(Continued from Page 2)

120 invitations were sent out for the affair and several out-of-town guests and alumni were present. The dancing lasted until 2 o'clock.

## THETA CHI

Yellow and green lights cast a soft glow over the floor as Theta Chi and their guests danced Saturday night. Leo Reisman furnished his usual pepy impetus to good dancing and since the crowd was not too large to be uncomfortable, the 125 couples enjoyed themselves immensely. Several alumni and their wives attended the affair and Professor and Mrs. James R. Jack acted as chaperones. The guests were forced to stop dancing at 12 o'clock, amid the usual maligning of Boston's "Blue Laws."

## STUDY PROBLEMS IN APPLIED CHEMISTRY

## Investigate Basic Principles of Petroleum Rectification

(Continued from Page 1)

anical equipment of artificial ice plants throughout the country.

**Heat Transfer Program Under Way**  
For the purpose of obtaining a general relationship for the rate of heat transfer between a solid surface and a fluid flowing past it, the Chemical Engineering Department is instituting an extensive heat transfer program. The work is being done by members of staff and graduate students, under the direction of Professor William H. McAdams.

The fundamental problem is to arrive at formulas for the expression of the rate of heat transfer in terms of the physical properties of the fluid, such as viscosity, density, thermal conductivity and specific heat. The effects of fluid velocity and of the dimensions of the pipe are also being thoroughly investigated. Study is also being made of the quantitative effect of heat transfer on fluid friction, a relation hitherto ignored in engineering calculations. Results already obtained show that this effect is large for oils of moderate viscosity.

## Publication on Heat Transfer Soon

Professor McAdams is writing a book on the subject of Heat Transfer, in co-operation with the National Research Council. This body was organized by the National Academy of Arts and Sciences to promote research on fundamental problems of general interest to industry.

The laws of heat transfer are of controlling importance in the design and operation of the diverse forms of heaters, coolers, condensers, evaporators, and the like, found in many different industries.

## Begin Basic Study of Rectification

Investigation of the basic principles of the fractional distillation of mixtures of liquids, called rectification, has just been started in this laboratory, by Professor Warren K. Lewis and graduate students of the Chemical Engineering Department.

The process of rectification has long been used, but the technique of calculations for mixtures of more than two components has not been developed. Study is to be made of multiple components, and since all petroleum refining operations have to deal with mixtures of extreme complexity, the data gathered will be of great value to the petroleum industry.

At this time the rectification columns being built for the work are nearing completion. One can be seen in the pit of the Chemical Engineering Laboratory, on the first floor of Building Two. A rectifying column 85 feet high, jacketed with recirculated flue gases, has been built and means of taking samples and recording temperatures at each stage of rectification are provided.

A technique has been developed for the analysis of the complex mixtures present in each stage of rectification which is far more accurate than any previously available. This will per-

## NEW LABORATORY HALF COMPLETE

## To be Used for Determining Pressure of Earth on Retaining Wall

Over in the section of the Institut grounds next to the railroad track another laboratory is being added to the Institute's already extensive equipment. This building is to contain apparatus for the experimental determination of the pressure of earth against a retaining wall.

The first tests in the laboratory are to be made in connection with the design of a retaining wall for the Fifteen Miles Falls development of the New England Power Company in New Hampshire. There are four carloads of backfill from this project now at M. I. T. awaiting test. The apparatus for this type of work consists essentially of a rigid concrete bin into which earth is filled. One side of the bin, corresponding to the retaining wall, is movable. The horizontal and vertical pressures on this wall are determined by means of scales for various values of the yield of the wall.

In the laboratory is also apparatus for measuring the load for a surcharge and for investigating the effect of saturated earth on the wall. These experiments are carried out on a wall 7 feet high and 14 feet long. The whole bin is founded on concrete while the building itself is set on a wood pile foundation.

The walls are to be of concrete with steel frame and will be covered by terra cotta stucco on the outside. A new feature in building construction is employed in the design of the roof which is made of pre-cast gypsum blocks reinforced with steel wires. These blocks are 3 inches thick, 4 inches long, and 2 inches wide. The substance is known as gypsum groate and similar material was used in the construction of the roof of the Boston Gardens.

Co-eds at the University of Utah learn many lessons in ordering and regulating their lives as a result of the very lax rules in force. There are no hours stated nor nights specified for dates. The girls are allowed to come and go at will. As a result there is more self-reliance, and co-eds seem to do as well in scholarship as at any University.

Juniors and seniors are required to wear caps and gowns to all classes at St. John's College, Brooklyn.

mit an accurate knowledge of what is happening up and down a rectifying column handling a multi-component material.

## Economic Value of This Research

The petroleum industry is an excellent example of a business which, because of its size and the importance of its chemical processes, can profit greatly from research. It is estimated that a saving of one one-hundredth of a cent per gallon in the rectification operation would make possible a total annual saving of over a million dollars.

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