DEAN BURTON APPROVES
T. C. A. NOONDAY TALKS

Says Thursday Meetings Help Students—Pays Tribute To
Burian Rand.

In speaking of the work of the T. C. A. Thursday, Dean
Burton said that the Association has been more successful in the last year than ever before.
In its early days the T. C. A. was not well fitted to the con-
ditions existing at the time, but with the passage of time the organization has made a great change in the effec-
tiveness of the Association. These meetings are admirably adapted to the conditions here. The men get an opportunity to get together at a time when they have nothing else close to dis-
tract their attention, and can go on speaking and doing what they want. As a result, the T. C. A. has become an important factor in student life. It does things which would be greatly missed if left undone.

The Dean also praised the newly introduced system of appointing advisors for new men. He said that many of these advisors had told them of the valuable help they received from their advisors. He also men-
tioned that the T. C. A. itself is essentially a student organization. It is controlled by the undergraduates and alumni, and they are responsi-
ble for its success. Moreover, it is so conducted as to appeal to all stu-
dents, regardless of sex. Its straightforward creed should appeal to all.

One opportunity for developing re-

posibility for the welfare of things around us is in showing ourselves

(Continued on page 3.)

CHEMICAL SOCIETY SMOKER

Prof. Moore Will Give Talk On His
Travels.

Prof. F. J. Moore will speak to-
tight at the Chemical Society smoker about his trip, taken last summer, from Germany to Switzerland and 

Iceland. He will show a number of lantern slides taken by himself and Prof. Deere of scenes passed through on the way and of places to which special excursions were made, to-
gether with a large number of gla-

ter views taken and made up by Prof. Derr. Prof. Moore will tell of the

President Dickson announced that it to be the last meeting of the So-

ciety before the year ends, and that a cor-

dinal invitation is extended to every freshman man who would like to

COME.

SOPHOMORE DINNER COMES TONIGHT

Class Baby To Be Presented—Four
Speakers Are Announced.

At the Sophomore dinner that comes tonight at 6:15, the Class of 1916 will get its first official glimpse of the class baby, Mrs. Malcolm Dine-

moor Kemp. The younger is the son of E. L. Kemp of Course II, and was born last February. A large per-

centage of the class is expected to be

there to give him a welcome.

The speakers are to be Prof. Noyes, Prof. Wickenden, David Caris and Joseph Lipke. Professor Noyes is associated with the chemical de-

partment, Professor Wickenden with the electrical, while Mr. Caris is with the mathematics and Mr. Carl with the English department. With these speakers chosen from different departments and being interested along different lines, there will be, without doubt, quite a variety in the subjects that they handle.

The committee has arranged with Mr. Colson for a dinner room that is out of the usual line of delicacies served at dinners and one that will appeal to the majority of the class. Just what the menu will be the committee is keeping secret. The dinner starts promptly at 6:15.

ORCHESTRA CONCERT

Concert To Be Given Saturday At
Y. M. C. A.

The Tech Show Orchestra will give its first concert at the Y. M. C. A., Huntington Avenue, on Saturday evening at 8:00. The orchestra will be assisted by the Banjo quartet of Tallman, Shedd, Yew and Choy. Local girls are invited to attend and tickets, which will be reasonable, may be obtained at the door.

All members of the orchestra are requested to report not later than 7:45 in formal dress. The men that did not attend the last rehearsal should report, as their presence will have some bearing on the final cast, which is to be made in the near future.

MUSICAL CLUBS

A picture of the Combined Musical Clubs, that is, Glee, Banjo and Mam-
dolin Clubs, is to be taken at Net-

man's on Saturday. Every member should be there in dress clothes at 1:30. There are to be more con-

certs until after mid-year.

SOPHOMORE PIPES

The sale of 1916 class pipes will be
continued in the Union today be-

 tween 1 and 2 and between 4 and 6.
The pipes are $2.50 and a box is required at the time of order-

ing.

Harvard's hockey team lost to the seven of the Syracuse Hockey Club last Wednesday night.

For the first time since 1897 Will-

son left off the Harvard football schedule.

COMPETITION FOR OFFICE ON SHOW BOARD BEGINS

Half Dozen Freshmen Turned Out
For Yesterday's Meeting—More Wanted.

Six men responded yesterday to the call for candidates for the position of second assistant publicity manager of Tech Show. These were E. E. Moody, H. J. Quimby, R. H. Ross, R. S. Stevens, T. Z. Havid, R. E. Bell. First Assistant Publicity Man-

ager Lucas met with them, acquainting

their qualifications for the posi-

tion and assigning work for the com-

petition. Practically all of the com-

petitors have had previous experience in the character required, either at high or preparatory school, thus necessitating a minimum of any Freshmen who were unable to meet him yesterday, Lucas will be at the Show office tomorrow at 10:30 and at 5:00 o'clock.

1917 VS. HAVERHILL

Basketball Team Plays High School
Five This Evening.

The Freshman Basketball Team leaves this afternoon for Haverhill, where they will meet the High School from that town in a game on Track II, at 5:45. Manager Rausch wants the following men to report: Richardson, Hj; Rausch, rt. Goyke, c; O'Brien, Ig; Kendall, ra; Cowlin and Gargan, substitutes. Richardson, who has been playing guard all season, has been shifted to forward and will post up to guard the position from now on.

E. E. TRIP

TRIP TO QUINCY

This afternoon the Electrical En-

gineering Society will take a trip to Quincy. The train leaves Newton Station at 3:45, and will stop at Union.

This season, the M. I. T. Co-operative Society is governed by a board of direct-

ors consisting of the President of the Institute, the Academic Coun-

telor, a representative from the Electrical Engineering Society and a 

graduate treasurer. This board meets once a year to hear the treas-

ury report and elect officers for the ensuing year.

Starting first with the sole purpose of obtaining a list of affiliated trade-

men, the Society gradually accumu-

lated money which was later used for scholarships. As it developed, sup-

ply rooms were established, and sales meetings held in the Institute with the officers of the 

Society. The Society now numbers over one hundred, and its activities are conducted in a manner which is to be commended. It is a splendid example of what can be done with a small amount of money and a little effort.

The committee is planning to carry this work forward in much the same way.

INVENTS NEW X-RAY LAMP

David William Coolidge, Ph. D., of M. I. T., '96, is the inventor of a new X-ray lamp of greater penetrative power than those now in use. Dr. Coolidge, who is also the inventor of the X-ray lamp of greater penetrative power than those now in use, is the assistant director of the research laboratory of the General Electric Company at Schenectady, N. Y.

ACTIVITIES DIRECTORY

A list of the different activities of the Institute with the officers of the same and their addresses was posted yesterday in the small bulletin board in the Union, near the Cage. The list was posted by the point system and anyone interested in any of the activities or corrections.

THE TECH

VOL. XXXIII. NO. 111. BOSTON, MASS., FRIDAY, JANUARY 2, 1914. PRICE TWO CENTS

INSTITUTE COMMITTEE HEARS REPORTS

Co-operative Society Reviewed—Res-

olutions Adopted—New Verse Of
"Take Me Back To Tech."

At the meeting of the Institute Committee, we yesterday afternoon several important reports were received, and a third verse was added to the song "Take Me Back to Tech."

The meeting was called to order at 4.30 by President Dorrance. Dean, Hulburd, Wyman, Langley, and McPherrin were absent. After the min-

utes of the last meeting were read, the resignation of W. L. McPherrin as Chairman of the Union Committee was accepted. The nomination of George A. Beach for thin office by the Executive Committee was ratified.

The report of the Point System Committee was accepted, along with the recommendation that membership in it be not restricted to members of the Institute Committee.

Concerning the reorganization of the M. I. T. Co-operative Society, there seems to be some difference of opinion among the members. The report of the committee investigating this Society reviewed its government and operations in the past, and went on to recommend a new scheme of organization. The present Society is governed by a board of direct-

ors consisting of the President of the Institute, the Academic Coun-

telor, and a graduate treasurer. This board should meet twice a year to hear the treas-

ury report and elect officers for the ensuing year.

Starting first with the sole purpose of obtaining a list of affiliated trade-

men, the Society gradually accumu-

lated money which was later used for scholarships. As it developed, sup-

ply rooms were established, and sales meetings held in the Institute with the officers of the 

Society. The Society now numbers over one hundred, and its activities are conducted in a manner which is to be commended. It is a splendid example of what can be done with a small amount of money and a little effort.

The committee is planning to carry this work forward in much the same way.

INVENTS NEW X-RAY LAMP

David William Coolidge, Ph. D., of M. I. T., '96, is the inventor of a new X-ray lamp of greater penetrative power than those now in use. Dr. Coolidge, who is also the inventor of the X-ray lamp of greater penetrative power than those now in use, is the assistant director of the research laboratory of the General Electric Company at Schenectady, N. Y.

ACTIVITIES DIRECTORY

A list of the different activities of the Institute with the officers of the same and their addresses was posted yesterday in the small bulletin board in the Union, near the Cage. The list was posted by the point system and anyone interested in any of the activities or corrections.

CAFÉ DE FLORE

Friday, January 2, 1914. 1.00-2.00—Soale of 1916 Class Pipes at Union.

2.20—E. Society Trip—Sth Station, Track 21.

4.00—Meeting of the Chess Club Executive Committee—Union.

4.00-6.00—Sale of 1916 Class Pipes at Union.

6.15—1916 Class Dinner—Union.

7.30—Chemical Society Smoker—Dorrance Hall.

8.00—Basketball, M. I. T. 1917 vs Haverhill High—Haverhill.

Saturday, January 3, 1914. 1.00-2.00—Sale of 1916 Class Pipes at Union.

11.30—Combined Musical Club Pic-

nic—Norman's, 5 Park Street.

2.00—Orchestra Concert—Y. M. C. A.

5.30—Temple H. T. vs Clapp Memorial—Weymouth.
THE TECH


Published only, except Sundays, during the college year by students of the Massachusetts Institute of Technology.

MANAGING BOARD

W. R. Taylor, ’14, General Manager
J. W. Atkins, ’14, Managing Editor
R. E. Armstrong, ’15, Managing Editor
E. Adkins, ’14, Advertising Manager
T. H. Millard, ’14, Art Editor
G. D. Holmes, ’14, Science Editor
E. H. Taylor, ’14, Treasurer

NEWS BOARD

J. B. Carr, ’14, Chief News Editor
J. B. Randrup, ’14, Assistant
R. F. Flanagan, ’14, Assistant
B. E. McAnear, ’14, Institute Editor
B. F. Hill, ’14, Assistant
H. P. Davis, ’14, Assistant
O. W. Nyman, ’14, Societies Editor
R. T. F. White, ’14, Assistant
H. W. Anderson, ’14, Exchange Editor
K. B. Hart, ’14, Assistant
H. E. Guest, ’14, Athletics Editor
H. P. Gris, ’14, Assistant
B. A. Thomas, ’14, Editorial-Editor
P. W. Mannell, ’14, Assistant News
L. E. Best, ’14, Science Notes

BUSINESS STAFF

A. E. B. Hall, ’15, Assistant Treasurer

WEBSTER

R. M. Bass, ’15, H. S. Keith, ’15
P. B. O’Connel, ’16, H. J. Green, ’16

OFFICE HOURS

(Daily except Saturday)
General Office, 4:30 to 5:30 P. M.
Managing Editor, 4:30 to 5:30 P. M.
Advertising Manager, 4:30 to 5:30 P. M.
Treasurer, 4:30 to 5:30 P. M.

Office, 40 Trinity Place. Phone: Telephone, May 3137, or 1238.

FRIDAY, JANUARY 2, 1914.

In Charge of This Issue...Editor: Harold Gray ’16
Assistant: R. R. Stevens ’17, W. F. Johnson ’17.

Dean Burton’s criticism of the conduct of individuals in the Union should bring this subject to the attention of all Tech men, particularly those whom it affects. Since the courtesy to guests in the Union extends not only upon the guilty men, but also to the student body in general, to see that this courtesy be not stopped. If sufficient public opinion were manifested, the most refractory offenders could be brought into line. The Union should be of particular interest to outsiders as giving a glimpse of the student in his every-day life, with all affections laid aside; and as offering an accurate view of the mass misunderstood “college life.” Instead, we find it characterized by the boorishness of an infinitesimal though aggressive minority.

It is fortunate that we have a man who can make just such a criticism as this. The unique relationship which Dean Burton bears to the students enables him to speak as he did without seeming officious. The student body cannot but appreciate his interest, and will be brought by the incident to realize more than ever that faculty and students are working for the same end—the betterment of Technology life in all its departments.

List of Activities

The alphabetical list of all Institute organizations was published in the previous number of The Tech.

ENGINEERING AND SCIENTIFIC NOTES

Do plants have nerves? Until recently scientists generally believed that this was not so. It was well known that certain plants exhibit a nerve-like twitching when subjected to a blow or a pinch of some sort, but this was attributed to a mechanical cause, the belief being that the phenomenon was one of transmission of motion by hydraulic means. Recently, however, some important experiments performed by Professor J. C. Bose on the particular plant mimosa have entirely disproved these ideas. Instead of employing a mechanical force as would be necessary to produce a mechanical twitching, he excites the nerves of the plant by an electric shock. The stem of the higher plants, which is jacked onwards under the stimulus of the shock, is connected with a delicate thread to a very ingenious device capable of measuring time with precision to one thousandth part of a second.

With this apparatus Professor Bose proved three facts which can only be explained on the hypothesis that these twitchings are nerve-like in character. First, the time taken for transmission of the impetus was found to be dependent on the temperature, a difference of one degree doubling the time. Second, the application of a drug or poison deadened or completely eliminated the effect. Third, the twitching was arrested by a continuous flow of electric current as is the case with nervous action in animal tissues.

It was found that with mimosa the latent period, or the time required for the plant to perceive a sensation, was less than a tenth of a second and that the sensation traveled with a velocity of two millimeters per second. These figures show that this plant, while much less sensitive than the higher forms of animal life, had a more responsive nervous system than many of the lower animals, a remarkable fact in itself. Furthermore, continued excitation of the nerves temporarily dulls them so that they require a period of rest to regain their normal activity.

It also seems that, as in animal life, this nervous system requires use for its proper development. A normal healthy plant which had been carefully grown under glass, was injured from the mechanical disturbances to which it would have been subjected in nature, was found to be exceptionally dormant until subjected to the “hard knocks of life” which served to cultivate a normal system after some days.

A detailed account of these experiments will be found in the issue of the Scientific American Supplement for December 27th.

FACULTY NOTICES

The problem books for the Physics Boat Course may be obtained in the basement of the Walker Building.

The Political Economy Exercises will not be given between December 29th and January 30th, inclusive.

BACK BAY BRANCH

State Street Trust Co.
130 Massachusetts Avenue, Boston
Safe Deposit Vaults

Credits interest monthly on accounts of $300 and over

MAIN OFFICE, 33 STATE STREET

STONE & WEBSTER

STONE & WEBSTER Management Association
Public Service Corporation

The American Brass Company
ANSONIA BRASS & COPPER BRANCH
Ansonia, Connecticut
Manufacturers of Bare and Insulated Copper Wire and Cable Drawn Copper Rods, Bars and Strips Brass Sheets, Rods, Wire and Tubes Sole Manufacturers of

"TOBIN BRONZE"
(Trade Mark Registered)

EIMER & AMEND HEADQUARTERS FOR CHEMICALS, CHEMICAL APPARATUS, MINERALS, ETC.
WE CARRY THE LARGEST STOCK OF LABORATORY SUPPLIES IN THE U. S.
First Quality Supplies Only Prompt Service
Our European connections are such that we are enabled to offer you the best services for day free importations on scientific supplies at the lowest prices.

ESTB. 1851
203-211 THIRD AVE.
NEW YORK CITY

GET YOUR BOOKS AT
The Old Corner Book Store, Inc.
27 AND 29 BROMFIELD STREET
BOSTON
DEAN BURTON  
(Continued from page 1)  

able to care for the student rooms. Dean Burton said that the present Union is a means of testing the responsibility of the students, and they care well for the Union, the Alumni will be willing to give them a better building at the New Site. He said that this applies especially to the members of T. C. A., since, if they show the proper ability, the Corporation may assign a part of the dormitories to the care of the Association.

As an example of the value of an unselfish spirit of helpfulness, the Dean cited the late Bursar Rand. When he first came to the Institute, he had a position like that of an accountant. He was required to do work that took but a few hours a day, which did not demand that he take any especial interest in the Institute. Though his nominal duties were so small, he voluntarily extended his work and his interests to such an extent that his loss is felt more than the loss of any other man here at Tech would be felt. He considered that his work was among the students, and he aided many of them who had a hard time to struggle along. He was a good example of a man who tried to find what good he could do in the world.

In conclusion, the Dean spoke of the noise which had interrupted his talk. He said that he himself was used to noise, and did not mind it, but that other speakers might object. When men of such note as Bishop Lawrence accepted invitations from the students to speak, the Dean considered it very inconsiderate in the men to allow loud talk and laughter in the small rooms of the Union.

The Junior Class at Brown has voted six dollars for the support of the chess team. The team expects to use this in support of the annual trip to New York.

With one exception the captains of six of the most important eastern college teams take part in the dashes. The exception is K. R. Shears of Navy, who is entered for the 220-yard.

The oldest of the dormitories at Dummer Academy was destroyed by fire Wednesday afternoon. Dummer was the first “prep” school established in this country.

Wadsworth, Howland & Co.
Incorporated
222 Clarendon St.
Also
84 Washington St.
THE THEATRES

TRENTON THEATRE
Rhe Passing Show of 1913
Evgs. 8.10. Mats. Wed. & Sat. at 2

HOLLIS ST. THEATRE
Evgs. 8.10. Mats. Wed. & Sat. at 2

MAJESTIC THEATRE
Vpgs. 8.10. Mats. Wed. & Sat. 2.10

COLONIAL THEATRE
Evgs. 8.10. Mats. Wed. & Sat. at 2

PARK THEATRE
Evgs. 8.10. Mats. Wed. & Sat. 2

MARRIAGE

BOSTON THEATRE
Evgs. at 8. Mats. Wed. & Sat. at 2

THE WHIP
Prices 25c to $1.50

COLONIAL THEATRE
Evgs. at 8. Mats. Wed. & Sat. at 2

THE LADY OF THE SLIPPER
 Evgs. 8.15. Mats. Thurs. & Sat. 2.15

PLYMOUTH THEATRE
Evgs. 8.15. Mats. Thurs. & Sat. 2.15

UNION

MAJESTIC THEATRE
Evgs. 8.10. Mats. Wed. and Sat. at 2

LITTLE WOMEN

SHUBERT THEATRE
Evgs. 8. Mats. Fri. and Sat. at 2

THE PASSING SHOW OF 1913

CASTLE SQ. THEATRE
Daily at 2.10 and 8.10

MISS POCAHONTAS

STUDENTS

PATRONIZE

OUR ADVERTISERS

THE YOUNG MENS HATS
FOR EVERY OCCASION

INSTITUTE COMMITTEE
(Continued from page 1)
organized and capitalized for such
sum as a body of 25 shareholders,
made up of Faculty and Alumni, shall
see fit. This body shall represent the
financial responsibility of the Society.
Show shall elect yearly a board of di-
rectors from each group of members,
that is, Faculty, Alumni, and Under-
graduate, with the exception that the
Institute Committee shall have the
right to add the name of the graduate
members from the various classes or
courses.
That the Board of Directors shall
include the officers of the society,
shall carry on all transactions,...
and include the officers of the society,
shall carry on all transactions...
They shall elect yearly a board of di-
rectors, however.

"Membership shall be open to all
persons connected with Technology,
in any way, including Alumni. The
fee shall be $1.00 per year.

"The location shall be within the
Institute buildings and furnished free
of rental charges by the Institute.

"A ticket shall be sold by the
society which in the opinion of the
directors are salable. The commit-
tee further recommends that all ar-
icles be sold at as great a discount
as possible.

At the recommendation of the
committee on the relation of Tech
and the Institute Committee, it
was resolved that the President of the
Institute Committee be ex-offi-
cio member of the Show undergraduate
board, and that the Institute Commit-
tee appoint all appointments to it.
By a further vote, the signatures of the
Presidents of the three upper classes
and the Dean of Faculty, if present,
and a letter from Major Briggs, in
favor of the procedure, were sealed
and ratify all appointments to it.

The question of supporting athlet-
es provoked some discussion, during
which it was stated that the present
system of athletics is considered
most satisfactory in large elections,
theInstitute Committee was in favor of
holding all future Shows.

DO NOT FAIL

THE TECH BARBER SHOP
585 Boylston Street
Copley Square
Bootlick
Second Floor

STUDENTS' CAST-OFF CLOTHING

RICHARDS SCHOOL OF DANCING
30 Holland Avenue
Huntington Chamber
Beginner Class Monday 5 P.M.
Intermediate Class Monday 5 P.M.
Advanced Class Wednesday 5 P.M.

DO NOT FAIL

CLASS & FRAT PIPES
We Carry the
BBB, GBD, Comoy, SSS, etc.
Pipes in all Styles

THE TRINITY COURT

BOWLING ALLEYS

TWO MINUTES WALK FROM ALL TECH BUILDINGS.

Unlimited facilities, no sentimentality, no refreshments, no games.
Alleys reserved and screened for private parties.

Come in and enjoy a little fun and easy

TECH BOWLING HEADQUARTERS
Established 1898. Opposite the Union

Trinity Court
Bowling Alleys

Tech Bowling Headquarters
Established 1898.

Two minutes walk from all Tech Build-
ings. Unlimited facilities, no
sentimentality, no refreshments, no games.
Alleys reserved and screened for private parties.

Come in and enjoy a little fun and easy

THE TECH, BOSTON, MASS., JANUARY 2, 1914.

THE ORIGINAL

The Original

THE CLEVER WOMAN

THEATRES

THE RED CANARY

THE LEAFY WOMAN

THE WHIP

THE LADY OF THE SLIPPER

PLYMOUTH THEATRE

THE CLEVER WOMAN

MARQUIS

The Passing Show of 1913

THE CLEVER WOMAN

THE RED CANARY

THE LEAFY WOMAN

THE WHIP

THE LADY OF THE SLIPPER

PLYMOUTH THEATRE

Under Cover

MAJESTIC THEATRE

UNION

MAJESTIC THEATRE

UNION

SHUBERT THEATRE

THE PASSING SHOW OF 1913

CASTLE SQ. THEATRE

MISS POCAHONTAS

STUDENTS

PATRONIZE

OUR ADVERTISERS

THE CLEVER WOMAN

THEATRES

THE RED CANARY

THE LEAFY WOMAN

THE WHIP

THE LADY OF THE SLIPPER

PLYMOUTH THEATRE

Under Cover

MAJESTIC THEATRE

UNION

MAJESTIC THEATRE

UNION

SHUBERT THEATRE

THE PASSING SHOW OF 1913

CASTLE SQ. THEATRE

MISS POCAHONTAS

STUDENTS

PATRONIZE

OUR ADVERTISERS

THE CLEVER WOMAN

THEATRES

THE RED CANARY

THE LEAFY WOMAN

THE WHIP

THE LADY OF THE SLIPPER

PLYMOUTH THEATRE

Under Cover

MAJESTIC THEATRE

UNION

MAJESTIC THEATRE

UNION

SHUBERT THEATRE

THE PASSING SHOW OF 1913

CASTLE SQ. THEATRE

MISS POCAHONTAS

STUDENTS

PATRONIZE

OUR ADVERTISERS