LARGE CROWD PRESENT
AT LAST T. C. A. TALK

Bishop Thomas Gives Interesting
and Practical Address to
Students.

A large crowd assembled in the
Union yesterday noon to hear Bishop
Thomas of Wyoming deliver the last
of the series of T. C. A. talks of this
term. The talk was practical, in that
it touched on points essential to the
welfare of all men present, for both
the present and the future.

He commenced by giving three
illustrations of sin as quoted from the
Bible and concluded with the idea that
to the mature individual it was a mat-
er of "curbing." He said that the
trouble with Wyoming was that it
did not care. He cited the example
of a man who refused to help his
church. In writing, the Bishop asked
the man if he would be one of fifty
men to contribute to the church. In
reply the man said that he "had as
much use for religion as Darwin had
for poetry; that his taste had been
touched on points essential to the
series of T. C. A. talks of this
Term Closes January 23. Examinations Begin Following Friday to last Eight Days. Second Term Opens February 10th.

The provisional schedule for the
mid-year examinations, which begin
on Friday, the twenty-fourth of this
month, extends over a period of
eight days, is published in full below.
This schedule, except for a few pos-
sible changes, will probably be the
same as the regular official schedu-
le fixed by the Registrar.

The last exercises of the term will
be held on Thursday, the twenty-
fourth, and the examinations begin
the next day and last until Saturday,
February first, giving in all eight
days of examinations, one day less
than the mid-year's of last year,
and three days less than the last final
exams.
The second term begins Mon-
day, February tenth, giving in all
days three more recess than last year.
All the courses have examinations
up to the next to last day, while the
Seniors and Juniors are kept until the
end. The Freshmen finish on Friday,
except those who take Biology in Den-
ver Thursday, the thirteenth, ex-
cept for German II, on Friday. The
Seniors finish on Friday, except those
who take Biology in Denver.
The schedule as it appears below is
arranged as follows: Subject, sub-
ject number in the catalogue, year
and time.

PROVISIONAL SCHEDULE OUT
FOR MID-YEAR EXAMINATIONS

Term Closes January 23. Examinations Begin Following Friday to last Eight Days. Second Term Opens February 10th.

B. Altton, 1913, to succeed D. O. Dunn, 1914, as treasurer of the Mandolin Club. Due to illness, Dunn was compelled to
d resign. His successor, Altton, has
been an active member of the clubs for four
years, and is at present manager of the
Mandolin Club.

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CATHOLIC MEETING.
Evolution to Be Discussed in
Union by Rev. Cusick.

The Catholic Club of the Institute
planned to have its nine days' confer-
encing meetings of the term tonight at
the Union. The meeting will begin at
6 o'clock, and for the speaker they
have the Rev. Peter R. Cusick, S. J. The topic to be dis-
cussed in "Evolution," and the speak-
er will divide his talk into three parts,
presenting the "Scientific Views of the
theory of evolution." The Reverend
Cusick is not only a learned scholar
but also a chemist of note. Everyone
in the Institute is invited to hear him.

D. O. DUNN RESIGNS.
R. A. Altton to Succeed Him as
Treasurer of Musical Clubs.

The Executive Committee of the
Musical Clubs has elected R. A. Al-
tton, 1913, to succeed D. O. Dunn, 1914,
as treasurer of the Mandolin Club.
Due to illness, Dunn was compelled to
d resign. His successor, Altton, has
been an active member of the clubs for four
years, and is at present manager of the
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In the big chess tournament, now
over, L. Hoyt was returned winner.
He defeated Brown on Monday after-
noon after one of the longest games
ever played in the history of the club.
This first game lasted from 2 o'clock
until 4, and included a total of
seventy moves. It was splendidly
played on both sides, and it was only
the score offered playing that
Hoyt finally won. The second game,
which was also a one on one back
side Payment, last 4½ hours, and
consisted of only half as many moves
as the first. Thus defeating Brown in
two straight games, Hoyt wins the
Chess Club championship, a title
which was hard fought from the be-
ginning. This tournament, with its
splendid play, has made the club in
excellent condition and ready for
contests with outsiders after the mid-
year. A schedule has not been ar-
nounced as yet, but the Harvard return
game is assured, and quite a number
of other games are under considera-
tion.

POSTER COMPETITION
FOR 1913 TECH SHOW

All Contestants Meet Manager
Whitfield Friday in Show
Office.

A meeting of the contestants in the
Tech Show competition will be held in
the Union at 7 o'clock this afternoon,
when G. L. Whitfield, 1914, of the Pub-
licity Department, will give the final
instructions regarding the work. It is
absolutely essential that all who are
working on posters, and who intend
to do so, should come to the Show
Office at this time and hear what is to
be done. Any of those posters submitted not comply with the re-
quirements as given at this time
there will be no time in which to
change the drawing, and the poster
will be barred from the competition.
Because of the proposed extra trips
this year to cities where the Show is
not well known, it is obvious that the
advertising is one of the most impor-
tant parts of the work necessary to
make the trip a success. In this poster
the most important means at the disposal of the Publicity
Department. It is for this reason that
an exceptionally good poster is de-
sired this year as the poster will be
close very soon after the mid-year
vacation although no definite time has
been set as yet. The time limit will
be one of the things to be discussed at
the meeting Friday.

CALENDAR

Wednesday, January 8, 1913.

4.00-5.30--Basketball Practice—Arena.

4.00-Hockey Practice—Arend.

5.00—Catholic Club—Union.

Thursday, January 9, 1913.

7.00—Hockey—Arena.

11.30—Observer Social Orchestra Re-
hearsal—Union.

5.30—Finance Committee Meeting—
Union.
THE TECH

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* * *

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WEDNESDAY, JANUARY 8, 1913

THE TECH

THE NAVAL ARCHITECTURAL SOCIETY held its fifth meeting of the year in room 32, Eng. C, yesterday afternoon, at 4 P.M. The business of the hour was preceded by a fairly full roll call and minutes, after which the matter of new society members was discussed.

The next important matter to be taken up was the question of the new society by-laws. This the treasurer reported that the thing was very low, as not comparatively few men have paid their dues, and it was thereupon decided that only those men who have paid up by the end of this week are to be considered members of the society for the term.

J. P. Constable, president of the society, then read a paper on the installation of power in small boats. The talk was a very interesting one and was thoroughly enjoyed by those present. As is known, it is the custom of this society to have their talks rather by members of the organization than by outside men.

The next meeting will take place the first Tuesday next. The speakers for this date have not yet been selected.

COMMUNICATION.

To the Editors of THE TECH:

The committee in charge of "Was Ist Lost?" wishes to think especially connected with the performance for their hearty support and re-creation in making it the success it has been. Special thanks are due to all those who participated in the performance, and also Mr. Smith, superintendent of buildings and power; Mr. F. H. Rand, the Tech Show Orchestra, the Faculty and the entire student body.

For the Committee:
H. K. Franshme.

COMMERCIAL OZONE

Dr. Franklin Tells of Many Interesting Applications.

In 6 Lowell, at 4 o'clock, yesterday afternoon, Dr. Milton W. Franklin addressed about thirty men on the production of ozone and its commercial uses. He is at present in charge of the General Electric Company's laboratory at their plant in Schenectady, and has been investigating the production of ozone there for a number of years, as well as having studied the large ozone plants in Europe. Dr. Franklin explained in some detail the various current theories of ozone production by means of the so-called silent electrical discharge between two oppositely charged plates. With several diagrams he was able to show how this change from the atomic molecules of ozone to the triatomic molecule of ozone could be wholly explained by the ionic theory now accepted by practically all physicists. This theory also accounts for the different results obtained when the potential and width of the air-gap are varied.

He then took up several of the difficulties encountered in the economical production of large amounts of ozone. One of these is caused by the lack of uniformity of the air between the two charged plates. This causes a difference of resistance and soon a spark passes across at one of the plates of least resistance. The potential in the vicinity is then lowered so that all electricity passes through this portion of the air-gap, with the result that elsewhere very little ozone is formed. This difficulty may be overcome by placing some diestreatic between the plates. (Continued to Page 3.)

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238 Washington Street, Boston, Mass.
OPPOSITE YOUNG'S HOTEL
OZONE MANUFACTURE.

(Continued from Page 3.)

metals, which, on account of its non-conducting qualities, insures an even discharge.

The greatest difficulty was the rapid corrosion of the metal which constitutes the plates, for upon investigation it was found that not even the most resistant metals, such as platinum and tungsten, were free from this effect of the electrostatic field. At present there are two remedies in use: either making the apparatus so simple that the plates can be very easily cleaned and renewed, or by the introduction of a second dielectric plate, so that all the discharge will take place between glass or porcelain rather than between the metal poles. The advantage of the first method is that the air-gap may be much smaller and the potential correspondingly less. The shape of the poles also influences the potential necessary for the operation of the machine.

Dr. Franklin described the machines developed in his laboratory in which the discharge takes place between a glass tube and an enamelled steel cylinder inside of it. By a very ingenious device the air-gap can be made very small and at the same time a large volume of air can be utilized. The low potential required by this machine makes it applicable to small units where there may be no competent engineer to care for them. He also stated that the machines used were of this tubular type, while the French companies seemed to prefer flat poles. A few of the more important uses of ozone were then mentioned. In England, ozone is used very extensively of this and of water purification, a very large plant for this purpose being installed at St. Petersburg. The French and German ozone interests have already formed an alliance which intends to operate in America as well.

In this country, however, the most widespread use of ozone is for the destruction of offensive odors connected with the manufacture of certain beverages, such as gin and beer. Among the uses cited as illustrations of the importance of the utilization of the stability of wines was that of the Russian Cement Company of Gloucester, which makes use of the same. Ozone is also used in the tannin, linoleum, fish oil and bleaching industries, and for the preservation of eggs and the aging of wines. In each case it is used because it is able to oxidize organic substances at much lower temperatures and more quickly than oxygen.

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EXAM SCHEDULE.

(Continued from Page 1.)

Heat Engineering 337. Year, 4. Time, 9-12.
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