

INDUSTRY NEEDS RESEARCH STATES ALDRED LECTURER

**Dr. F. G. Cottrell Tells of Extent
To Which Government Uses
Laboratories**

DESCRIBES REACTIONS IN PRODUCING AMMONIA

The extent to which industry is dependent upon laboratory investigations for its success was the keynote of the eighth Aldred Lecture delivered by Dr. F. G. Cottrell, Director of the Nitrogen Fixation Laboratory, last Friday. "I want to emphasize particularly the necessity for careful research following closely in cooperation with any industrial development," said the speaker.

In introducing Dr. Cottrell, President Stratton said, "We have had several able and competent engineers point out the problems which they meet. This afternoon we have a scientist and I hope that he will point out the relation that exists between the laboratory and the engineer, how the engineer must lean upon the laboratory in the solution of great problems. Dr. Cottrell was formerly Director of the Bureau of Mines and is now the Director of the Nitrogen Fixation Laboratory, one of the most difficult pieces of scientific work that the Government has undertaken."

Described Ammonia Processes

In his lecture, Dr. Cottrell described in detail the three processes in use at the present time for the synthetic production of ammonia, describing the cyanamid, the Haber, and the arc processes. According to the lecturer the cyanamid process is the commonest in the United States while the method discovered by Haber is used extensively in Germany and on the continent of Europe. The arc process is used in Norway.

The cyanamid process has met with greatest success in this country, according to Dr. Cottrell, who said, "The cyanamid plant was operated and completed and some thousands of tons of material made to demonstrate its availability, but the synthetic ammonia plant did not operate successfully before the time of shutting it down after the armistice." The high cost of the electric current in this country prohibits the use of the arc process here.

Coal and Fuel Cost Big Factor

He prophesied that the nitrogen fixation industry would pass from an industry depending on electric power to an industry based on coal and fuel matters. This will be brought about because of the fact that "the cost of synthesized ammonia is about 60 per cent in the preparation of hydrogen and purification, whether it be by electrolysis or chemical means." In commenting upon the ability of this country to compete in the world market as manufacturers of synthetic fertilizers, Dr. Cottrell said, "I don't know whether they could actually compete on the fertilizer side or not; I rather doubt it at the present moment."

The lecturer also told of the work which was being done in the Nitrogen Fixation Laboratory in Washington, D. C. He pointed out the nature of the research and showed illustrations of the various pieces of apparatus which were used.

MASONS OBSERVE LEAP YEAR BY JOINT DANCE

Chinese and Blindfolded Dances Add Novelty to Affair

Holding the first get-together social affair that has ever been attempted by the three Boston colleges, Technology, B. U., and Harvard, the Masons turned out an attendance of 170 couples at their Extra Day Dance last Friday.

During the intermission, a Chinese dance was given which caused much applause by the audience. Afterwards, the men were blindfolded and led around the hall until they had lost any idea of where they were. They were then allowed to go forward until encountering a girl, with whom they must dance.

Billy Lossez's orchestra furnished the music and played from 8 until 12. The patrons and patronesses consisted of Mr. and Mrs. H. S. Bird and Mr. and Mrs. J. W. Corrington from Harvard, Professor and Mrs. Roy Davis and Mr. and Mrs. W. J. Goggin of B. U., and Mrs. R. C. MacLaurin and Major and Mrs. R. T. Pendleton from Technology.

SAYS NEW DORM TO BE COMPLETE NEXT MONTH

Despite the recent brief periods of cold weather, the work on the new dormitories has been consistent. The plumbers are already at work setting the fixtures and the plasterers have reached the fifth floor. Major Smith stated that if the work continued in the future as it has during the past two months that the buildings would be completed by the middle of next month.

TECHNIQUE WILL REDEEM SIGNUPS

**Statistics of Last Year's Book
Show Profit Per Copy
Of 71 Cents**

Technique signups will be redeemed in the main lobby every day this week from 12 until 2 o'clock at the usual price of \$2.50. The day for the Technique Rush has been set aside for April 19. Those who wish to participate in it must have a redeemed signup in their possession.

The Managing Board of Technique has recently compiled some statistics of the expense and income of last year's book, which show a profit of 71 cents per copy. Expenses consisted of printing \$3.94, binding and covers \$1.24, engraving \$1.14, operating \$5.53, and miscellaneous \$2.91 to total \$7.14. Income was from sale of books \$3.42, advertising \$2.40, organizations and fraternities \$1.81, and miscellaneous \$2.22, totaling \$7.85.

Plan to Reduce Profit

The Managing Board this year is planning improvements on the book with the intention of cutting down the profits as much as possible. A name will be placed on the cover of the book for those who desire it at a cost of 50 cents.

Those who signed up late and paid \$1.50 will pay a total of \$4 instead of the standard price of \$3.50. Anyone who has not secured a signup will have to pay \$4 for a stamped receipt entitling him to a copy which will be delivered after the Rush.

The opening event of Junior Week will be the Technique Rush and the organization is planning several surprises for those who participate in the annual fight. The Rush will be held sometime in the early part of the afternoon. Further plans will be announced later.

WILL GIVE LECTURES ON ATOMIC STRUCTURE

**Professor Blanchard to Repeat
Course of Last Year**

An elective course of ten lectures on Atomic Structure will be given by Professor A. A. Blanchard of the Chemistry Department on Tuesday and Thursday mornings at eight o'clock during the third term of this year. The lectures, which will be given in room 10-250, are open to all students at the Institute and especially the men in the chemistry courses are invited to attend.

A similar series of lectures were given by Professor Blanchard last year. The talks will tell how the existence of electrons came to be recognized, how their properties were accurately determined and how the chemical and physical properties of matter depend on the number and configuration of electrons within the atoms. The work of Millikan, Thomson, Langmuir and other scientists in this field will be discussed.

Give Two Exams for Credit

The course is intended to give the student "a comprehensive idea of the properties of these small particles of matter," Professor Blanchard says. "The popular magazines, even the newspapers, have abounded in articles explaining the curious behavior of electrons and the wonderful structure of the atom. Reading such popular articles leaves one with a sense of bewilderment. One can hardly comprehend the statements, much less imagine the experimental contrivances by which the truth of the statements was ascertained."

The course will extend from Tuesday, March 25 to Thursday, May 1, and all those who wish to receive credit for attendance at the lectures may register. Two one hour examinations being given them during the course.

BEAVER SHOWING FRIDAY RESULTS IN CLASS FIGHT

**1924 Still Holds Its Talisman
In Spite of Efforts
Of Juniors**

OVER FIFTY MEN HELP WRECK DRAWING ROOM

After having had its picture taken in Great Court and then being exhibited in the Main Lobby without causing more than passing interest in its presence there, the Beaver was escorted by its guardian Seniors to room 3-440 after someone rushed into the lobby crying "The Juniors are up in the drawing room. They said to bring it up if you want a scrap."

The Senior guardians immediately took the Beaver up to the fourth floor on the elevator and then started for the drafting room. They were greatly reinforced by classmates who had been attending the Aldred Lecture, which had just let out a few minutes earlier.

Many Desks Knocked Over

The fight for the Beaver began as soon as the Seniors reached room 3-440. The Juniors struggled fiercely to obtain possession of the mascot, but their efforts were in vain. All that was accomplished was the disarrangement of a score or more of the desks, several of which were turned over.

Professor W. H. James '96, fearing that damage might be done to drawings that men had been working on all term rushed into the mob and soon succeeded in cutting it down. He later stated to a reporter in regard to the affair, "I appreciate very much the promptness with which the fellows responded to me. They acted very decently. I thought I might as well try to stop a bullfight, but they quit right away."

The Seniors then took the Beaver down into Great Court, crying to the Juniors to "come and get it if you want it," but as no one followed they gave a couple of yells for the Beaver and the Class of 1924 and then took it back to its hiding place. As the statue was being placed in the machine, W. H. Robinson, Jr. '24, Senior president, called out, "Don't worry about the damage, fellows. We've plenty of money to pay for it in the treasury."

Claims Juniors Have No Spirit

A Senior who refused to give his name stated, "The Juniors have less spirit than any Class I could imagine. One of the professors in a Junior section told them that the Beaver was outside and said he would excuse anyone who wanted to go out and fight for it. Not one man went out. And say, a Junior held the door open while the Seniors brought the thing into the lobby."

Major A. S. Smith said of the affair, "Although I'm 56, if I had been a Junior when the Beaver was brought into room 3-440 last Friday I think I'd have taken a couple of black eyes in an attempt to take it from the Seniors."

CORPORATION XV TRIP OPEN TO ALL COURSES

**Society Extends Privilege of Trip
To All Students**

Corporation XV has announced that every undergraduate will be given the opportunity to take the annual spring trip of the society this year. A limit of 35 men has been set for the party taking the trip and as about 25 men of the course have already signed up 10 more undergraduates out of other courses can still be accommodated.

This year the trip includes a visit to Bridgeport and New York City. At Bridgeport the party will visit the Bridgeport Brass Works and the Bullard Machine Tool Company's large plant. Following a day and a half stay in Bridgeport the party will go to New York where several large industrial plants will be inspected. A special Pullman has been obtained for the party which will be used as headquarters during the stay in Bridgeport. The Hotel Commodore will be the stopping place while in New York.

The total cost of the trip comes to about \$25 which is payable in advance. Those interested in the trip are asked to see the bulletin board in front of Professor Dewey's office in building 1 or see an officer of Corporation XV.

Call Off Musical Club's Spring Trip

The spring trip of the Musical Clubs, which was to compensate for the short one taken last Christmas, has been definitely called off. Rumors to this effect have been going the rounds recently, but definite information was secured Saturday from N. H. Defoe, Publicity Manager of the Clubs.

Defoe refused to state why the trip was cancelled and G. E. Parker '24, General Manager of the Clubs could not be located, either at his fraternity house or his home in Newburyport. Opinion among the men on the clubs concerning the action varies, some saying they are glad of the opportunity for going home, and others expressing dissatisfaction with the management at not being able to take the trip.

ODD DECORATIONS TO FEATURE PROM

**Fraternities Can Secure Sign
Ups For Chaperones Of
House Parties**

With further details of the decorative scheme for the Junior Prom decided upon and with arrangements for the dinner well under way, the committee is progressing rapidly toward the execution of its plans. Arrangements have also been made for the accommodation of the chaperones at the various fraternity house parties.

Contrary to a previous statement that the decorations for the affair would be entirely floral, the committee has decided to adopt a decorative plan of a nature, the details of which they refuse to divulge. The Dennison Paper Company is undertaking the work of adorning the hall through the person of Miss Groves of their interior decorating department, who will supervise the operations.

Plan Suggested by Michigan Prom

An odd plan of decoration was suggested by the scheme adopted and used at the recent Michigan Junior Prom. At that affair, the hall was decorated to produce an almost Alaskan effect. With the ceiling a mass of blue sky and icicles, the refreshment booths as Eskimo huts, and other details of a similar nature, the scene as a whole produced an Arctic effect.

Fraternity houses holding house-parties during Junior Week may secure sign-ups for the Prom for their chaperones by applying for them at the time of redemption of the regular sign-ups. The price will be \$5.00 and there will be no redemption fee as in the case of regular sign-ups.

Man Must Buy His Own Signup

Men purchasing sign-ups for the affair will not be permitted to purchase more than one. This applies to fraternity men as well as non-fraternity men. Sign-ups will not be sold to non-Technology men and those wishing to secure them must do so on the day specified for their respective classes. Juniors will purchase their sign-ups on March 3, the Seniors on March 4, and the two lower classes on the fifth.

The committee desires that the statement that Mrs. W. M. Reid would act as matron at the prom be corrected. Mrs. W. M. Ross will render her services as matron at the affair.

PROCEEDS OF WALKER TEA DANCE ABOUT \$40

About \$40 was cleared at the tea dance given by the Walker Memorial Committee for the benefit of the athletic teams, according to an estimate made by a member of the committee immediately after the dance. The dance was fairly well attended, as approximately 125 couples were present. Music was furnished by Johnson's Syncopators, a 15 piece orchestra. This is one of the largest orchestras that has ever played at a student dance in Walker. Nevertheless, general opinion was to the effect that the music was not particularly good.

The patronesses were Mrs. H. S. Ford, Mrs. W. M. Ross, Mrs. L. M. Passano, and Mrs. King.

MAKE TENTATIVE PLAN OF EVENTS FOR SENIOR WEEK

**Class Day Set for June 9, Prom
And Graduation to Come
On the Tenth**

EXECUTIVE COMMITTEE OFFICERS ARE CHOSEN

**Preliminary Budgets Will Be
Prepared by Chairmen
Within Week**

A tentative program for Senior Week which was drawn up by the Senior Week Committee recently, extends from Thursday, June 5 to Tuesday, June 10. A Class dinner will be held on the 5th, the picnic on the 6th and a tea dance on the afternoon of the 7th. The Baccalaureate Sermon will be delivered on Sunday, June 8 and the 9th will be featured by Class Day and a Pops Concert in the evening. The graduation exercises and the Prom will take place on the 10th.

The program as it stands leaves the evening of June 3 and the evening and afternoon of the 4th open for some additional event and the committee has not attempted to assign anything definite to this time since they are waiting suggestions from the members of the class. A motion to accept this program was tabled at the meeting of the committee because the completing of the schedule on the 3rd and 4th might necessitate a complete change in the order of the rest of the program.

Select Minor Committees

At the meeting of the Senior Week Committee held last Thursday, the officers of the executive committee were elected. They are G. E. Parker, chairman; C. M. Phelps, secretary; Roelwell Hirschfeld, treasurer, and Ernest Robinson, Jr., president of the Class, is also a member of the body.

Committees to take charge of the separate events during the week have also been appointed. The chairmen of these committees are as follows: Picnic Committee, W. H. Manning; Prom Committee, J. D. Fitch; Tea Dance Committee, T. F. Bundy; Banquet Committee, Ernest Hirschfeld; Pops Concert Committee, E. W. Brugman; Class Day Committee, A. D. Carothers; and Baccalaureate Sermon Committee, W. W. Quarles.

Estimate Budgets

The advisability of publishing a Class Book has also been discussed by the committee but nothing definite has been done in this matter at the present time. Preliminary budgets will be made out by the chairmen of the minor committees before they leave for the holidays and an estimate for the cost of the entire project will be made in a short time.

A novel method has been used by the executive committee in order to assure full attendance at the meetings of the Senior Week Committee. All men who are absent are fined one dollar unless they offer an excuse for their absence to the executive committee. No proxies are accepted. A written report is required from each committee at every meeting and by this means the executive committee hopes to arrange all of the matters relating to Senior Week in the most efficient manner.

PROFESSOR KENNELLY SPEAKS ON WIRELESS

Professor A. E. Kennelly of the Electrical Engineering Department at the Institute spoke last Saturday before the Twentieth Century Club on the subject "Wonders of Wireless Communication." He told how radio would have a powerful influence in the promotion of better international understanding, pointing out that at the present time "the most distant individual on this planet is now only one tenth of a second away."

CALENDAR

Wednesday, March 5

7:45-Combined Professional Societies Smoker, main hall, Walker.

Thursday, March 11

6:30-Class of 1928 Dinner, Faculty Dining Room, Walker.