

DeForest Developed Responder at IIT

Armour Is First School in U.S. To Be Associated With Wireless

by Sherwood Benson

"The flag pole is missing!" exclaimed Dr. Lee De Forest as he stood gazing at the Main building of IIT after an absence of 45 years. Aside from the disappearance of his favorite flag pole which had supported the first wireless telegraphy antenna in this hemisphere he seemed to think that nothing had changed since his departure from Armour in 1901.

After De Forest received his PhD in electrical engineering at Yale he came to Chicago to work for the Western Electric Company. Shortly afterward he resigned to join an embryo wireless telegraphy company in Milwaukee which later floundered when its design of transmitting and receiving apparatus proved to be impractical. He then returned to Chicago to become assistant editor of the "Western Electrician Journal."

During this time he was also working on a device to automatically detect wireless signals. Every night after work, De Forest would return to his small room on West Washington Blvd. and attempt to work out some of his ideas by gaslight. But meager equipment forced him to find some other means of developing his "responder."

In the fall of 1900, DeForest approached Professor Clarence Freeman of Armour Institute of Technology in an attempt to obtain some laboratory space for his experiments. An agreement was reached and soon afterward DeForest began working mornings as an assistant in the physics lab., while afternoons found him devoting his time to the development of his responder, using the available Armour equipment. He worked on the second floor of Main which he considered "ideally suited" for his research. A large induction coil, used to transmit the signals, was placed in the lab, while his responder was put on a mobile table. He was then able to increase the transmitter to receiver distance as the sensitivity of the responder increased by simply rolling the table down the corridor. He used a novel antenna of his own design which was attached to the flag pole. This consisted of lamp cord and wooden barrel hoops which somewhat resembled a bird cage.

During the evenings DeForest taught college algebra and trigonometry at the Lewis Institute. Reminiscing about his stay at IIT, he says he can well remember those cold winter nights and that "long ride on the 'L' to the Lewis campus."

When De Forest first came to Chicago he became good friends with Edwin H. Smythe, a young engineer working for the Western Electric Co. It was Smythe who transmitted the signals to De Forest on the roof of the La Kota Hotel, which was located at 3001 S. Michigan Ave. When De Forest heard the prearranged signals coming over his own responder he became heedless of the rain which started to pour down, for his dream of wireless telegraphy was coming true. This was the first of a series of tests made from Armour Institute that set all Chicago in an uproar. With this inspiration, Professor Clarence Freeman of the EE department began working on a transmitter to be used in conjunction with De Forest's responder.

De Forest left Armour in the spring of 1901, headed for the yacht races in New York. It was his in-



Dr. W. Lee De Forest

tention to use his equipment including Freeman's transmitter, to report the results of these races.

Looking back on his stay at Armour Institute Dr. DeForest considers it the "foundation stone" of his career. After he left Armour his pioneering genius in electronics brought him wide acclaim throughout the world. Among the many honors bestowed upon him is an honorary degree as Doctor of Engineering awarded by Lewis Institute in 1937. His invention of the audion tube earned for him the knowledge that he was directly responsible for creating a six billion dollar industry that employs one million men.

At the present time DeForest is in charge of research development at the American Television Laboratories and is also supervising correspondence instruction at the American Television Institute. With 73 years of scientific progress behind him, Dr. Lee De Forest is not resting upon his laurels, for the doctor's work in the development of his new television projection tube is symbolic of his continued efforts to further advance the frontiers of electronics.

● CURTAIN CALL

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costumed and set in a nondescript, non-Elizabethan manner so as to be more intelligible and acceptable to a generation some three hundred years removed from Shakespeare's time.

It is not for me to say whether this treatment is good or whether it is, as some of the critics say, a sacrilege and defamation. All that I can say is that until I actually saw the living, breathing personalities and their interaction on the stage, I could not understand nor appreciate them no matter how many times I read their lines in a book. For this understanding and appreciation, I give all thanks to Evens.

There is little need to go into a long discussion about the plot or the characters of Shakespeare. You have all probably been subjected to that in high school or in a course in Shakespeare. The main thing about this production is, as I have said before, that you can finally understand why people who should know about such things always speak in superlatives about this play. So if until now just the mention of Shakespeare or Hamlet have made you shudder with fear and abhorrence you will be pleasantly surprised at the true simplicity and beauty of the play as done by Maurice Evens.

Fraternities and Sororities

PRAETORIANS

Praetorians held a dance at the Fine Arts building after the University of Chicago basketball game. Louis Sopkin, social chairman, made all the arrangements also furnished the entertainment when he presented his interpretation of ballroom dancing. Several of the fellows even offered to act as his manager if he should want to go on the stage.

Herb Relman, president, said that the next big party would be held on New Years Eve when the formal initiation of pledges will take place.

PHI KAPPA SIGMA

Following a chapter meeting Monday Evening, December 9, an election of officers was held at which time Bill Ponton was elected president of the chapter, and the retiring president, Bud Havlik, received the customary tubbing in ice water. Bud declined the privilege but saw things in the right light when a little force was brought to bear—about as many men as could put him there.

Most of the offices have changed hands for the coming term. Jim Stueber has been elected vice-president while George House is the treasurer for the second consecutive term. Paul Jahn has been placed in charge of the pledges (. . . Poor pledges. Two new men, Bob Gyllenswan and Morris Carlson, will be under Jahn's rule, having recently been pledged.

PI KAPPA PHI

Dean of Students Jack F. White was the featured speaker at Pi Kappa Phi annual Founder's Day banquet. The banquet, held Tuesday at the Chicago Bar Association, was a joint function of Alpha Phi chapter and the Chicago alumni chapter. Dean White spoke upon the subject of college social fraternities, especially as they exist on the IIT campus. Also on the program was Charles R. Rowe, Pi Kap district arcon who recounted the years activities of the fraternity.

On the sports scene, the Pi Kap basketball squad takes to the hardwood this week in an attempt to gather in its second win of the season. One game has been played so far, and in this the Pi Kap defeated a highly rated Alpha Sig team.

Socially, the holiday season will open with a Christmas party planned for Dec. 21, according to John Sachs, social chairman, the fraternity party "will start on its merry way at the house about 8:30 p.m." For New Year's Eve, Sachs has planned "an evening of unparalleled fun" with Pi Kaps extending invitations as far as Detroit.

DELTA TAU DELTA

Monday night was election time at the Delta Tau Delta house. A good job had been done by the nominating committee and the elections went off without any trouble. The new officers are: Frank Bagamery, president, Tom Galavan, vice president, Ed Carstens, corresponding secretary, Marshall Newcome, recording secretary, and John Baker, sergeant-at-arms.

This coming Friday will see an informal Christmas party at the Delt Shelter. Brother Galavan is in the hospital but Schooner McClain is really working on the affair.

ALPHA SIGMA PHI

The Alpha Sigma Phi Founders' Day Banquet was held in the chapter house Tuesday, December 10, for the first time in the history of Alpha Xi chapter. In years prior, the anniversary celebrations were held in loop hotels. However the chapter felt that the national officers, who were guests at the celebration, should see the house and enjoy its privileges.

(See FRATERNITIES, Sororities on page 5)



Christmas usually brings out the best in everyone. The most beautiful works of music and inspired writings of literature form the very structure of the institutions associated with the yule season. Handel's "Messiah," Tschalkowsky's "Nutcracker Suite" Berlin's "White Christmas," and the multitude of Christmas carols all provoke heartwarming sensations truly in keeping with the yuletide spirit.

Literature too has played an important role in the formation of Christmas as we know it today. Fully realizing the influence of the writers in instilling the Christmas spirit in the hearts of men, Dr. Edward Wagenknecht, distinguished anthologist and member of the faculty, has brought together a collection of Christmas stories which is destined to become a perennial favorite of the nation's reading public. A Book-of-the-Month-Club selection, "The Fireside Book of Christmas Stories" sold over half a million copies in its first season (1945). It is a group of stories rich with the traditions of holly, Christmas trees, St. Nicholas, Dickens, and the Birth of Christ. Many of your favorite authors, stories, and memories can be found between the covers of this thoroughly entertaining book.

The first section of the collection, which is essentially religious, is devoted to "Christmas in Christ." Here is the essence of the real Christmas. The beauty of these writings as adapted from the scriptures of Saint Matthew and Saint Luke combine with other writings of the Birth of Christ to form a splendid combination of what is, after all, the very foundation of Christmas.

The second section of the volume is entitled "Christmas in Santa Claus." It appropriately enough be-

gins with "How Come Christmas!" and "A Visit From St. Nicholas." (Which we all remember from our childhood days). Here is presented to the adult reader the many memories, associations, and traditions which played so important a role in the development of the fine old character of St. Nick.

Of course Christmas is wrought with the inseparable bonds of Dickens. His tales of joyfulness, holly, good will, plum pudding, and merriness, typify the spirit of the third section entitled "Christmas in Dickens." Also included in this section are two excellent stories by Daphne duMaurier and T. F. Powys on the Birth of Christ as it might occur today.

"Christmas is Home" provides the theme for the last group of stories. In contrast with the preceding English writings, the fourth section is devoted entirely to distinctly American stories. Here is the spirit of Christmas as it actually exists today. It combines the spirit of giving, the mistletoe, the "White Christmas," in fact all the traditions of the yuletide season which are so typically American.

So if you've been away for the past couple of Christmases and want to brush up on the spirit of things, here is a book that will provide everything that Christmas has to offer. It's a book you can take out and browse through year after year during the yule season. It's a treasured gift and a splendid volume for any bookshelf.



(EDITOR'S NOTE: This column is for expression of ideas from readers. Letters containing not more than 250 words will be printed. Anonymous letters will not be considered for publication, although a writer's name will be withheld from publication if desired.)

Open Letter to Mr. W. J. Parduhn:

Upon reading of your noble comments on the parking situation in *Technology News*, I became so irked and disgusted that I thought it was about time someone opened your eyes. You say there is ample parking space for everyone. Ha, have you seen

what your three pet parking lots look like around 9 or 10 A.M.??? Better yet, you try to park a car in one of those lots at the time mentioned!! As your car goes bounding crazily along, don't forget "the lots have been graded by the Institute." I feel sure I am expressing the thoughts of many others at school when I say that the parking situation is deplorable, and at the same time inexcusable!!!!

H. COOPER

VARSITY FOOTBALL

The generally acknowledged basis of school spirit is student participation and attendance in extra-curricular activities — particularly athletics. I'll tell you right now that I'm pleading for a football team. Yes, I'll agree that basketball at this school hasn't drawn the crowds which it deserves, and some argue that football will get about the same attention. The pessimists say that football will get the brush-off here, where even the greatest crowd-drawer in the country gets the cold shoulder. But the prime reason that basketball can show a larger total in attendance is simply because more games can be played in a season. This is not a true sign that basketball is more popular than football. And to attest to the opposite—has there ever been a

basketball game for which people were willing to pay five hundred dollars for a single seat?

Even engineers do have enough time to give two hours an afternoon for practice. Georgia Tech brings out fine teams year after year, and no complaints are heard from there.

To have a varsity football team would put Illinois Tech on the map and increase funds for improving already existent activities. Football pays for itself and then some. So vote "yes" if a poll comes your way, and you'll be helping yourself, your fellow student, and your school.

DON KASMAR

CAFETERIA PRICES

I admit cafeteria prices affect me very little since I carry my lunch to school but yesterday I was charged 12c (not 6c) for one scoop of ice cream.

I know that recently I have been buying huge cups of ice cream, containing 3 to 4 scoops for 11c at the International House, which caters to the general public and does not profess to be non-profit. I know that at the neighborhood grocer (not a chain store) I buy milk for 21c a quart, just three cents more than they charge here for a pint.

HANS H. NORD