



## Students Crowd in Science Hall for Wheelwright Talk

### Polaroid Glasses Given To View Movies

An astonished group of Armour students crowded Science Hall last Tuesday, November 8, and saw controlled light perform some amazing feats including illumination without glaring reflection, three-dimensional motion pictures in full colors, and the creation of colors in colorless materials. This strange behavior was revealed in a lecture on "Polaroid" by George W. Wheelwright, III, former instructor of physics at Harvard University and at present a partner in the Land-Wheelwright Laboratories, before the Armour Tech student branch of the American Society of Mechanical Engineers.

Featuring the latest application of this revolutionary light control, a type of lighting that illuminates the glossiest paper without reflected glare, the scientist explained the properties of Polaroid and described the 250 years of research by the world's most famed physicists in the effort to effect this form of light control on a practical basis. No success has been achieved, he said, until the youthful Edwin H. Land perfected Polaroid.

### Polaroid "Combs" Light Waves

Mr. Wheelwright held two transparent discs of Polaroid, about a foot in diameter, in front of his face on which a light was directed. Rotating one of the discs, his face was gradually obscured until it was blacked out completely by the previously transparent discs. The scientist explained this ability of two sheets of Polaroid to stop light as a crossing of their invisible structures or "optical slots". He explained that science believes light to consist of waves vibrating in all directions. Polaroid confines or "combs" those waves into one plane. When the second sheet of Polaroid is at right angles to the first, the single plane waves cannot get through the contrary "optical slots" of the second sheet.

### Use Special Glasses

Actually, he explained, these slots are minute, invisible crystals—iodo-sulphate of quinine—so small that they cannot be seen under a microscope. There are billions of them in every square inch of Polaroid. The inventor had to create these infinitely small crystals, said Mr. Wheelwright, and then find a way of pointing their needle-like axes in one direction and holding them in that position. This was accomplished by placing them in a transparent, cellulose matrix and stretching the sheet in a plastic state.

The ability of Polaroid to eliminate glaring reflection, he said, is (Continued on page four)

## A.I.E.E. To Visit Steel Mill Friday Afternoon

At 10:30 Friday morning, James H. Miller, assistant superintendent of the electrical department of the Wisconsin Steel Company will deliver a short talk on "Electrical Apparatus in the Operation of a Steel Mill" before the A.I.E.E. student branch. Mr. Miller will probably outline the problems which confront the men of his department.

Later in the afternoon, the senior and junior electrical students will be excused from classes for the afternoon, in order to be at the steel plant which is located one block east of Torrence Avenue on 106th street for an inspection trip through the plant. Students interested in attending the trip are requested to meet at the main entrance of the steel company at 1 o'clock. V. Terp and A. Zarem are in charge of transportation. Any students having room in their cars are asked to notify the men listed above.

On December 2, a talk will be presented by F. J. Dahleiden, of the Insulated Wire division of the Okonite Company. Mr. Dahleiden will also illustrate his talk with samples of wire and cable.

## Armour 'Eye' to Present 'Muskie' Fishing Picture

A two-reel movie entitled "Nibigami Muskies" will be presented tomorrow at 12:20 in Science Hall by the Armour Eye. This picture was obtained through the courtesy of the South Bend Bait Company and is as the name implies, a fishing picture. It is a thrilling picture showing "musky" fishing at its best.

Muskelonge, as the proper name goes, are among the largest and gamest of all fish found in American waters. Their great power and jumping ability can tax the skill of even the best of fisherman. It is a thrilling picture of "musky" fishing at its best.

## Student Directory Out; On Sale at Bookstore

At last the long awaited school directory is out. It came out this morning and is on sale in the bookstore for ten cents. This directory will be the largest ever published and will contain the names, addresses, telephone numbers, year, and department of 1306 students; the names, addresses, telephone numbers, department, and room numbers of 147 faculty members; the names, addresses, telephone numbers, and department of 27 graduate assistants and fellows; and the names, addresses, telephone number, and position of 48 officers and employees of Armour Tech.

## Orders for Soph Jackets Must Be Placed by Friday

Next Friday at 11:30 will be the deadline for placing orders for sophomore jackets. Orders will also be taken every day in the lobby of the Main Building. There are two types of jackets, namely the campus coat type which costs \$9.50, and the jacket type which costs \$7.

On all orders placed with the committee, a deposit must be paid. The minimum deposit for the \$9.50 jacket is \$3.00 and for the \$7 jacket is \$2.50.

Measurements for both types of jackets will be taken Friday at 10:30 in the electrical laboratory on the second floor of the main building.

## Students Gather on Ogden Field In Solemn Armistice Ceremony

### Mechs to Tour Electrical Co. This Thursday

An inspection trip through the Chicago plants of the Hotpoint Electrical Company, will be made this Thursday, by the senior members of the A.S.M.E., at 2 o'clock. All senior mechanical engineering students will be excused from classes to enable them to attend the trip. An invitation has been extended to all junior members, who have no classes on that afternoon, to attend the trip. Registration, for the trip, must be made with any member of the inspection trip committee before Thursday. The group will meet at 2 o'clock at the plant located at 5700 West Taylor Street (900 S.). The trip has been planned in conjunction with the Business Policy course at Armour and will show the production problems and control, unique to the manufacture of domestic electrical appliances. According to the inspection trip committee, the best transportation includes either the Garfield Park elevated or the Roosevelt Road street car direct to the plant. Professor Nachman, faculty chairman, will accompany the group.

At the next meeting of the society, which will be held Friday at 10:30 a.m. in Science hall, several reels of motion pictures, titled, "Earth Moving," "Power for Oil Fields," and "Acres of Rice" will be shown through the courtesy of the International Harvester Company.

Last Friday, November 11, the members of the senior engineering classes were invited to attend the annual Automobile Show meeting at the Saddle and Siroin Club of the Stockyards Inn at 8 p.m. This invitation was extended to Professor D. Roesch, by D. E. Gamble, chairman of the Chicago section of the Society of Automotive Engineers. A feature of the evening was the speech by Joe Goschelin, Technical Editor of *Automotive Industries*, who described the new features of the 1939 motor cars. Mr. Goschelin is intimately acquainted with both the engineering and production divisions of all the motor car companies.

## Three New Labs For Physicists

Enlargement of the physics department is rapidly nearing completion. Necessity for greater laboratory space was realized when overflow sections were held in the laboratories. At this time, three advanced physics laboratories, new offices, a machine shop, and shop for class apparatus have been completed.

At the present time, the new laboratories are being used for research on the production of vitamin D by electrical methods. These experiments are being conducted by Dr. Thompson.

An extension of the number of courses offered by the physics department has taken place as part of the expansion program. Four graduate courses in advanced physics are being given by Professors Copeland, Zeigler, Thompson, and Jakob. A course in advanced mechanics is being offered as an undergraduate course by Mr. Potter.

A number of lectures on subjects pertaining to physics will be given in the Chicago area in the next few weeks. "Determinism in Physics" will be given by Bertrand Russel, famous English mathematician and philosopher, at the International House Auditorium, on November 25. This talk is given under the auspices of the Physics Club of Chicago.

Dr. Thompson will also give a series of lectures on "Radium and Radioactivity" at the Wilson and Wright Junior Colleges.

## President Heald Addresses Large Assembly

Standing with bared heads, facing toward the east, last Friday at 11 o'clock on Ogden Field, eleven hundred Armour men paid solemn tribute to those who made the supreme sacrifice in the Great War. Particularly honored by the ceremony were those Armour men who gave their lives in the cause of democracy. These men were: Jean Pierre Bechaud, '17; Charles Abbott Dean, '14; Stanley Dean, '06, who was also a member of the faculty; Jasper J. French, '19; Claude Hill, '16; Einar L. Nielsen, '19; Reuben L. Paskill, '17; and Enoch N. Severin, '15.

At 10:30 the entire student body formed according to classes on both sides of Federal Street. Led by Marshalls chosen from each group the students marched on to Ogden Field in a body to stirring marches played by the band.

### Band Offers Selections

When the entire group of students was assembled the band played several numbers following which the glee club sang *America, the Beautiful*, and *America*.

The speaker was President Heald who in a stirring oration depicted the horrors and suffering of the last war. He told of the part which Armour played in the service of its country and of the various activities of Armour men who heeded their country's call.

### Classes Dismissed for Day

At 11 o'clock the entire assembly faced east while far in the distance a trumpeter played *Taps*. Following the eleven o'clock pause President Heald concluded his talk by saying that the only thing that the World War ever did for the world was to furnish the finest argument for peace that has ever been formulated. Then, in accordance with previous Armour traditions, classes were dismissed for the day and the student body disbanded in an orderly manner.

This year's assembly marks the inauguration of a new plan for the Armistice Day ceremony. In previous years there has been an outside speaker present, but from now on the ceremony will be an all-Armour affair.

## Broadcast Shows Role of Architect In Slum Clearance

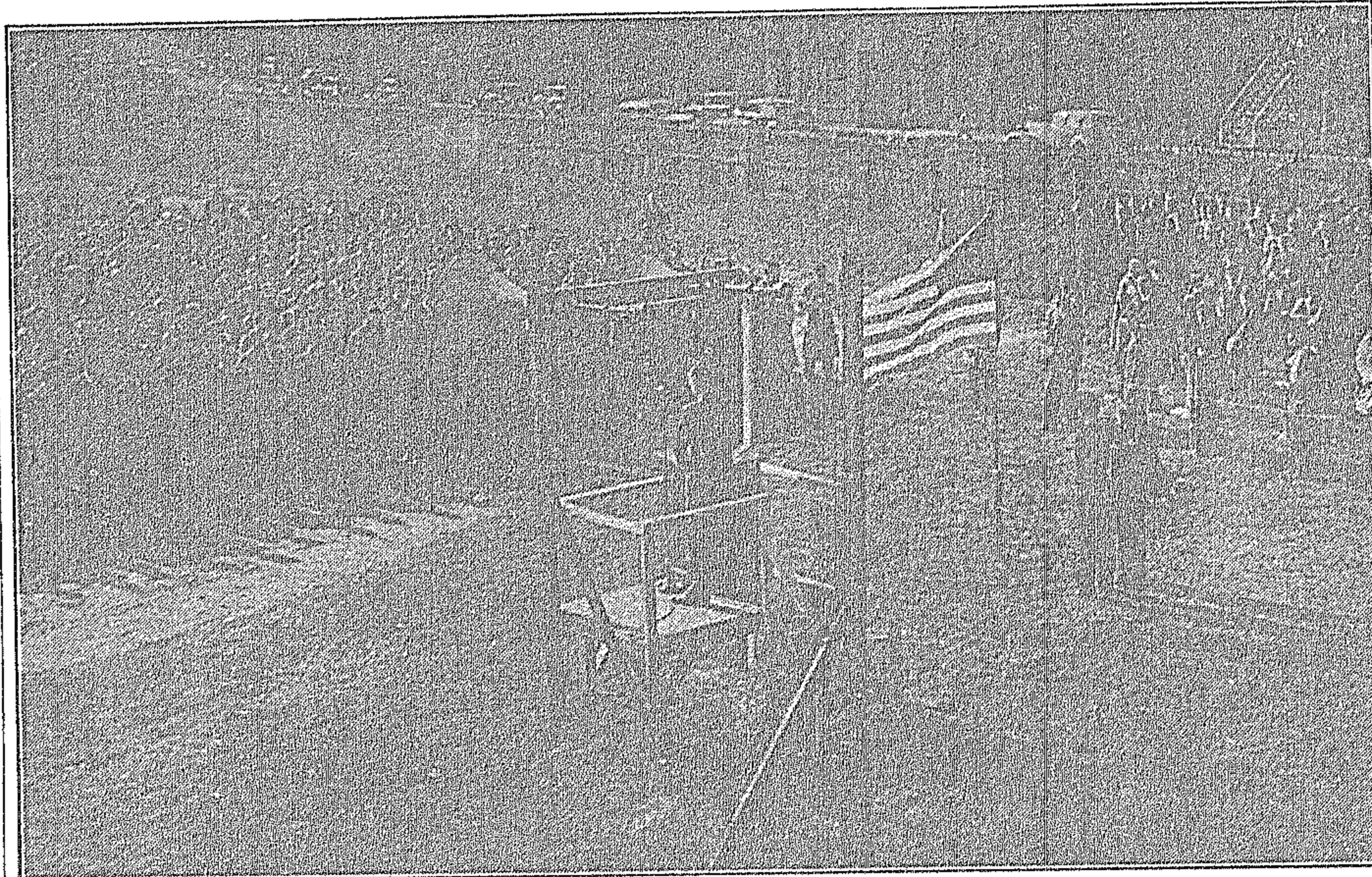
The last of the present dramatic series on the "Engineer" in his varied fields of endeavor stressed the architect and his contribution to a more complete life for the socially underprivileged. The program was devoted to the architect as a man of imagination who treats with the social aspects of housing.

Today there are millions of people who live in districts in which sanitation and cleanliness have been neglected. These factors, so essential to decent living, tend to drive despair and disease into the home. It is these homes from which children are born to continue in this same path of unprogressive activity.

Today's housing projects have given people the opportunity to develop in an atmosphere that is clean and wholesome. The odors no longer permeate the air and the windows are no longer dirty; cleanliness has produced a new view on the once gloomy horizon. The modern planned housing project has its open courts, its airy rooms, and its playgrounds as a result of the imaginative planning and understanding of one man, the architect. The architect is a man who contributes much to a happier, more complete social life.

The second series beginning November 19th will again bring the interesting phases of the various branches of engineering, dealing with each in a more detailed manner. The "Wirephoto" will be the first followed by "The Golden Gate Bridge, the Discovery of Radium, and the Transmission of Electricity."

## ARMISTICE DAY ASSEMBLY IN OGDEN FIELD



Some of the 1500 faculty members and students as they listened to the address delivered by President Heald at last Friday's assembly. The glee club and band are shown at the extreme right.

## Red Cross Roll Booth to Open In Main Lobby

The annual drive of the Red Cross to secure members for its roll call will be held at Armour today and tomorrow. A booth is installed in the lobby of Main for the purpose of securing members.

Membership will consist of two classes. One membership, involving a fee of \$1 enrolls the person on the official roll and entitles him to a Red Cross sticker and button. A second class of membership, requiring only a voluntary contribution entitles the contributor to a Red Cross button.

Armour's drive is being held in conjunction with the national drive which is held every year from Armistice Day until Thanksgiving day. Two movies will be shown today in Science Hall covering the subject of the work of the Red Cross. "Why Not Live," the subject of one film, deals with methods of accident prevention. The second film, "Behind the Flood Waters" covers the heroic work done by the Red Cross in times of national disaster.

The American Red Cross was organized in the United States in 1881. Its activities have expanded, until at the present time, it has a total of 3,700 chapters and is prepared to render aid in almost any type of emergency. The scope of the Red Cross work is indicated by the following services: Disaster Relief, War Service, Public Health Nursing, Home Hygiene and Care of the Sick, First Aid and Life Saving, and Home and Farm Accident Prevention.

All of the work carried on by the Red Cross, is financed by voluntary contributions. All newspaper advertisements, radio programs and most of the work is freely donated. In the last year, over \$10,000,000 was spent for relief work of various kinds.

The work at Armour is being carried on under the direction of William Yeager.

## Reed Lectures on Use of Matrices at 11:30 Today

This morning at 11:30 in 217 Chapin, Professor Reed will lecture on "Matrices in Electrical Networks." He has published research papers in the *Journal of Electrical Engineering* on this subject. Matrices occur throughout modern mathematics, but have just recently been applied to electrical networks. Illustrations will be given of the application of matrices to electrical networks.

Last Friday, Professor Reed lectured on "Heaviside's Operational Calculus," pointing out that the "P" operator and the "I" functions do not satisfy the simple laws of algebra which make this theory very suitable. Professor Reed feels that any problem that can be solved by Heaviside's method, can also be easily solved by such methods as matrices.

## Pi Tau Sigma Pledges Six Into Honorary Mechanical

Six men were pledged to Pi Tau Sigma, honorary mechanical engineering, last Tuesday evening, November 8, in the Rho Delta Rho House. Three juniors and three seniors were honored. The juniors who were pledged are Robert S. Kohn, Ralph H. Wagner, and Alvin Winkler. The seniors are James Gilbert Jr., Edward Grabacki, and Robert A. Windblad.

The men were chosen because of their high scholarships and prominence in school affairs. Pledge duties will start immediately.

### NOTICE

All students that were enrolled last semester in the physics laboratory course are asked to call for their reports this week.

The Registrar's office has many articles including pens, slide-rules, hats, etc. Any students who have lost any articles are asked to call for them as soon as possible.