CHEMICALS SEE THREE REELS ON NITROCELLULOSE

Nitro-cellulose proved to be a fascinating topic to those who attended the A. I. Ch. E. Meeting last Wednesday at 11:30 in Science Hall.

Three reels of film showing the manufacture of nitrated cotton from its growth to its final use, were shown. Mr. Mayfield of the Hercules Powder Company ran the film and talked informally pointing out things which needed explanation, and adding information here and there.

The cotton lint as it comes from the cotton gin must be subjected to a thorough cleaning and drying process. The cotton is shipped to the nitrating plant in bales as a snowy white, short fibered material. At the nitrating plant still more purification is necessary.

The cotton is nitrated, that is treated with nitric and sulfuric acid, and it is then dried; a very hazardous operation. The finished product is packed in steel drums with thirty percent denatured alcohol.

The various valuable uses of nitrocellulose were illustrated by animated drawings. Its film forming character, its solubility, its toughness, strength, and durability were all illustrated. Celluloid, brushing laquers photographic films, and platic materials are some of the products made from nitro-cellulose.

The films were furnished through the courtesy of the Brevolite Lacquer Company of North Chicago, Illinois. Comments from the students showed they were highly pleased with the discussion.

Allen Helmick Held up Friday

Three unofficial revenue agents of the dusky set picked up Allen Helmick, '33, last Tuesday evening, and in the lingo of the trade "went through him," making off with one hundred percent of the findings before Al quite realized what had happened.

Thirty-fifth street seemed the safest route from the west side to Chapin Hall, where Helmick was due at the Alpha Chi Sigma meeting. As fate would have it, a gang of negroes thought it a good place for a collection party. Equipped with razors, they attacked their man at the entrance of the alley near Federal street and carried the struggling gentleman into the alley, not without considerable protest, however. They proceeded to remove from his personage $13.50 in cash, one Illinois Central Ticket, 2 pens, 2 pencils, and a wallet containing various necessities of a chemical, such as ten dollar breakage cards, etc.

Al testified that he felt his strength slightly inadequate to cope with the efforts of three strong men. He tried to yell, but was stopped by one of the assailants; he tried to escape as soon as his feet touched the ground, but the odds were against him.

Since this was his first experience, he was perhaps a bit nonplussed as to the conventional procedure, but in the future ambitious hoodlums may find a surprise in store. Al is reputed to be a shining light of the Armour Tech Rifle club and will nonchalantly turn the tables.

Armour Represented at Purdue Meeting

(*Continued from page* 1)

In a further effort to promote this relationship with industry, Purdue University expects all its faculty members to make as many such contacts as possible. These faculty members undertake commercial research problems for the industries and also serve them in consulting capacities. Professor Moreton and Professor Peebles found that practically all of the faculty members in the College of Engineering at Purdue are making these contacts with industry at every opportunity. The university authorities not only encourage it but even require it.

Perhaps the keynote of the entire conference was expressed by Dr. Edward C. Elliott, President of the University, who stated very concisely what Purdue is trying to do. He said, "We are trying to industrialize education and educate industry.

REVIEWS

NUMBER

The Language of Science
By Tobias Dantzig

As students in a technical institution, we are exposed to a number of courses in mathematics. Our impressions are probably something like the following: it is a systematic application of fixed rules, dependent for success on our ability to recognize forms; it is free from the human element and none of its laws are subject to discrepancy; it is a well-ordered logical continuity, unfolded step by step to fortunate discoverers.

In "Number" there is quite forceful evidence to alter these impressions. You will find that the story of mathematics is thrillingly vibrant, a tale of human stumblings and gropings and failings; of chance discoveries, of bitter disappointments, of exalting conquests. Nothing makes more absorbing reading than the history of man's attempt to grasp the nature of the universe. In "Number" you will find it in really fascinating form.

Can you conceive of romance in the arithmetical operations? Dantzig tells us that not so long ago, days of elaborate work were required for the simplest of calculations; those that today can be performed in a few minutes. In the interim came the discovery of the principle of position, quite simple and like so many things, obvious after explained. But preceding this and making it possible, came the invention of the symbol "zero", conceived in India as an empty column on a counting board. The author calls it one of the greatest single achievements of the human race.

Has an algebraic expression conveyed anything of life to you? Then learn of the algebra of the Greeks which necessarily had to be expressed as words because they had no symbols! Read of the discovery of the use of letters "just yesterday" in the 16th century, a discovery which was the turning point in the history of a science thousands of years old. General relations comprehensible to only a few thus became understandable to vast numbers and an immeasurable step forward was made.

And the irrational number? Its advent undermined a religion and ruined a philosophy! The Pythagoreans had built up an elaborate system of number worship that to them was beautiful and infallible. Then, like a lightning bolt came the discovery that the diagonal of a square was incommensurable with its side, that the number expressing it was not an integer. Fearing the wrath of God at the uncovering of this imperfection in Nature, those aware of it formed an order, the Alagon, under solemn oath to keep their existence undivulged. However, the Pythagoreans were lost.

Who cooked up this infinity idea and why? Where did that familiar "lay eight" come from? The story is a wonderful one: beginning with the realization of a "last number" belonging to the gods. This was the keynote of most ancient religions. The thread is dropped, to be taken up in the 17th century by Cantor, Gauss, and Galileo, who attempted its anatomy and precipitated an argument which raged for years, becoming the fundamental issue of the science of number.

"Number" presents the science of mathematics in what to most of us is an entirely new setting: a background of humanism. The greater portion of the text is easily understandable but some sections will require study. These are few, how, ever and may be handled with no special difficulty. I strongly recommend reading this book. Its cultural attributes are enhanced by unusual treatment which makes an intensely interesting entity.

Morton Fagen.

ALUMNI NOTES

J. E. Tarman Ch. E. '30, visited Armour Institute recently. He is employed in the research department of Armour and Company along with C. E. Morris Ch. E. '30.

C. Kley Miller '25, has a daughter 4 months old. He is selling insurance for Miller, Castle and Freiberg.

Swimming Team Elects Captain

Congregating for the last official time this year, the 1931 swimming team elected Andrew Weston to captain the 1932 squad. Weston shaded out Cavanagh in an exceedingly close race. Andy was high point man this season and has always been a consistent point winner . He specializes in the 220-yard-free-style and the 100-yard backstroke events. Incidentally he is the holder of two school records. The captain-elect has been a member of the squad for three seasons, winning a letter for each season.

On recommendation from Coach McGillivray, the following men were accepted by the Athletic Board as being eligible to receive letters. The customary minor letters will be given A. Weston, J. Cavanagh, and E. Byanskas. Giovan will be awarded a sweater.

Because of his stellar performances during his stay on the squad, ex-Capt. Knox will be awarded a major letter. Knox is graduating this year and was recommended by Coach McGillivray as being worthy of the major award.

With the exception of Knox, the team's roster will remain intact next season and therefore will be expected to display its usual winning qualities.

Rifle Club Competes With State Experts

Last Saturday night the Armour Tech Rifle Club met its hardest competition of the season in the team shoot of the Illinois Rifle Association. This shoot was held at the Outdoor Meet at the Palmer House.

It is considered a very important meet and as some excellent teams are entered every year, a team has to be above average to win a place. A trophy is awarded to the team that has the highest score and medals are given to the members of the first, second, and third teams. The results of this meet were not at hand at the time of this writing but the Armour boys should have a set of medals and have a good chance to win the trophy.

Last Thursday night, the individual shoot was held. Donald G. Wilson was the entrant from the Armour Club, but was beaten out of third place by two points.

On the 30th of this month the Rifle Club will shoot against the Humboldt Park Gun Club at their range. The Armour boys are expected to win this easily.

Fire Protects Visit Large Can Factory

America's largest can manufacturing plant was inspected by the Senior Fire Protects on their inspection trip last Friday.

Large cans, small cans, thin cans, fat cans, tall cans, short cans are all made in this plant located at Klyburn and Willow.

The tin and sheet steel is introduced into the factory and is cut to size for the cans. It is then pressed into a cylindrical shape and put together by a pressing machine. The top is made but not put on the can until they are filled at the cannery.

A special part of the plant is devoted to the plating of the insides of the cans to permit their use as containers of food. This is necessary because canned food eats away the iron and forms a very poisonous substance.

The seeds of some fruits sometime sprout in the can and form a gas which reacts with the can if not coated with tin or some other metal. Therefore, it is vitally important to the canning industry that the cans be coated. This is accomplished by running the cans through an electroplating machine or by coating by means of an acid reaction. Sometimes it is necessary to coat the cans with some special alloy in order to preserve the contents of the can.

The American Can Company have an extensive chemical laboratory where they are constantly testing their cans for acidic reaction and to make sure they are safe for food, as well as various other products.

About twenty Fire Protects went on the trip, led by Professor Holmes.

New Books

NON-TECHNICAL

This Thing Called Broadcasting
Alfred Goldsmith

The Engineer
J. H. Hammond

Education of a Princess
Marie, Grandduchess of Russia

TECHNICAL

Our Mobile Earth
R. A. Daly

Principles of Engineering Thermodynamics
Kiefer & Stuart

Internal Combustion Engines
J. A. Polson

Structure of Line Spectra
Pauling & Goudsmit

Doctor Freudenberg Will Address Chemists

The subject of the regular monthly meeting of the American Chemical Society to be held Friday, May 1 at the City Club is one which will be of unusual interest to chemicals because they have studied it in considerable detail in organic chemistry. "Optical Activity and Configuration" is the title of the lecture to be given by Karl Johann Freudenberg, Ph.D., Professor of Chemistry at the University of Heidelberg.

In addition to the main lecture which begins at 7:30, there will be the usual group meetings at 8:45. Among them are "Glass Blowing Technique", a film to be shown to the Physico-Chemical Group, and "The Structure of Gelatinous Precipitates" to be spoken on by J. R. Bayliss to the Inorganic and Analytical Group.

FRATERNITY NOTES

PHI KAPPA SIGMA

The annual Father and Son banquet that is to be held May 8, will be conducted on a somewhat different plan this year. It will include an inspection of the lighting display of the Chicago Lighting Institute in the Civic Opera building preceding a buffet supper. The Northwestern and Chicago chapters are included with the local chapter.

DELTA TAU DELTA

Frank Davis and L. Packer Brown visited us and extended congratulations on the approaching thirtieth birthday of the chapter.

TRIANGLE

Brothers Windbigler and Venema were elected to represent us at the Twenty-Second Annual National Convention which is to be held this Thursday, Friday, and Saturday, at the Edgewater Beach Hotel.

The chapter as a body attended the funeral of our honorary Brother Alfred E. Phillips, whose death was a blow to our fraternity as well as to the Institute.

Marsh Whitfield '30, has been awarded his chemical engineering degree from Columbia University within a year after graduation from Armour.

S. K. D. has been challenged to a ping pong match which will be played within a week. The Truss Club was defeated by a score of 4 to 1 in a baseball game with the Triangles.

SIGMA KAPPA DELTA

Hard Times showed its effect at the annual Sigma Kappa Delta Hard Time party held Saturday, April 18. This year the other fraternities at Armour were invited to attend, nearly every one being represented. The music was furnished by Bob Woodruff and his snappy orchestra. These fellows as well as the other merrymakers, were dressed to suit the occasion. The costumes ranged from doll to housekeeper's outfits for the ladies, while the men represented themselves in varying fashions—from farmers to milkmen.

Eugene Voita, an alumnus architect, has received first honor in the international contest sponsored by the Chicago Bridge and Iron Works Company.

Phil Deiwert '28, is back with us again after a brief visit to Indianapolis.

Faculty and Varsity To Compete in Golf

The faculty will engage the Armour Varsity golf team in a match next Saturday. This is an annual affair in which the Professors usually display a great deal of skill.

Last year's contest shows a defeat for the Varsity which they will be out to avenge. Evergreen Country Club will be the host.

Advance information shows that the following men will represent the faculty: Bibb, Huntley, Ensz, Allison, Heald, Sear, Leigh, and Grafton. Varsity honors will be upheld by Captain Weis, Johannisson, Pearson, Ollison, Wyant, and Weldon.