

Discovers Triple Weight Hydrogen

Lord Rutherford Starts New Scientific Research

Hardly over the shock of hearing that Drs. Urey, Brickwedde, and Murphy had discovered a double weight hydrogen, scientists have been startled again by Lord Rutherford's latest announcement. Experimenting with deuterons—the nuclei of heavy hydrogen atoms—he has made them collide at high speed and has obtained results that lead him to believe in the possible existence of a triple-weight hydrogen.

In this country Professors Latimer and Tuve have looked for this new type of hydrogen. They have not isolated it, but merely watched the paths of the nuclei as they were bent by a magnet. Tritium, as this new substance is called, is wanted, in a concentrated form, by both chemists and physicists, who would be satisfied with a thimbleful.

Princeton Man Has Process

At the recent meeting of the Electrochemical Society, Professor Taylor of Princeton described his laborious process of isolation. Dr. Bleakney, a colleague, had proved that heavy water (combination of double-weight hydrogen with oxygen) contained one part of the tripleweight in 200,000 parts. Professor Taylor attempted the same process to obtain tritium as is used to obtain deuterium—namely, a complicated process of electrolysis.

Starting with seventy-five tons of ordinary water, Professor Taylor patiently electrolyzed and evaporated it. After a year he has ten drops. Even this concentrate is not pure. For every 10,000 parts of deuterium water the ten drops contain only one part of tritium, the triple weight hydrogen.

More at Princeton Than Anywhere
Experiments show that in ordinary water (H₂O) this triple-hydrogen is present to the extent of one part in 10,000,000,000 parts of water. The ten drops at Princeton, impure as they are, contain more triple-weight hydrogen than is to be found in any other place in the world.

Similar experimentation has attempted to ascertain whether the electrolytic process concentrates the heavy oxygen of mass eighteen over that of normal oxygen of mass sixteen. It would appear that the process is not very efficient, for a sample concentration of H₂O (normal water) by electrolysis from 120,000 volumes to one volume increased the heavy oxygen concentration merely from one part in 500 to one part in 450.

Other Separation Methods Needed

"While such changes in the ratio of the two species are sufficient for many scientific experiments," said Professor Hugh S. Taylor, chairman of the chemistry department at Princeton. "It will be necessary to utilize other methods of separation if it is desired to produce pure specimens of the two forms of oxygen similar to those already obtained with deuterium, the hydrogen of mass two."

Incidentally, the atomic weight of ordinary hydrogen, long regarded as 1.0078, is due for revision if recent Cambridge University experiments are independently substantiated. The new figure, 1.0081, is derived from a complex system of "atom smashing" which is ten times as accurate as the mass spectrograph, formerly considered the most exact of all atom scales. If this new discovery is independently upheld, every atomic weight table in the science textbooks of the world will become automatically obsolete.

Employment Subject of A.S.M.E. Address

Methods which graduates of engineering schools can effectively use in obtaining employment were presented last Friday in a talk by Monroe A. Smith, C.E. '10, who spoke at a meeting of the Armour branch of the A. S. M. E. Mr. Smith is personnel director of the U. S. Gypsum Company, and suggested personal evaluation of abilities and the answering of blind ads as being among the possible ways of obtaining work. Several things to be avoided in applying for a job, such as not dressing to suit the type of work, were also brought out.

Chi Epsilon Initiates Four Juniors; Senior

Chi Epsilon, honorary civil engineering fraternity, initiated five members of the junior and senior classes in civil engineering last night. The men are B. Jones, a senior, and J. Galandak, J. O. Larson, T. S. Ramotowski, and G. A. Zwissler, juniors.

The initiation ceremonies were held in the chapter rooms, and were followed by a dinner in the faculty grill and a visit to the musical revue "Life Begins at 8:40". A number of faculty and alumni members attended.

Speech Awards End A.S.M.E. Convention

Junior and senior mechanicals attended the Third Midwest Student Conference of the American Society of Mechanical Engineers, which was held at the Allerton Hotel, Chicago, last Monday and Tuesday. Professor D. Roesch and three Armour students, J. J. DeBoo, R. J. Maci, and F. Meyer, represented Armour at the General Arrangements committee for the convention.

At the technical sessions, prizes in the student theme contest were awarded.

First prize was won by E. J. Wellaver of Marquette U. for a paper on "A Mathematical Determination of the Contact Length of Helical and Herringbone Gearing." E. W. Jensen, U. of Iowa, on "Stresses in an Automobile Engine Crank Shaft", won second prize, and the third went to J. DeHamer, Michigan Tech. His subject was "The Development of a Test for Set in Split Bamboo Fishing Rods." W. W. Henning represented Armour at the electrical sessions with a talk on "Critical Speeds and Torsional Vibrations in Chank-shafts."

ARMOUR TRACKMEN LOSE TO NORTHERN ILLINOIS TEACHERS

The Techawks suffered an unexpected setback when a delegation of tracksters from Northern Illinois Teachers' College invaded Ogden field on Saturday, April 27, and went home with an 82 to 49 victory to their credit.

Captain Roberts and Faust led the Armour attack with 13 and 8 points, respectively. Nori starred for the visitors, scoring 14 points. In contrast with the grand slams which the local dashmen had scored in previous meets, Northern Illinois turned the tables and made a clean sweep of the 220-yard dash and allowed only one Armour man to place in the century dash. The Techmen evened things a little by virtue of the three-way tie in the high jump between Bejeck, Nelson and Thornton, all of Armour.

The outstanding performances of the day were made by Nori and Cowan, both of Northern Illinois. The former won the broad jump with a leap of 22 feet and 2½ inches, which surpasses the Armour record by 6 inches. Cowan, not to be outdone, heaved the 16-pound shot a distance of 42 feet.

The relay, as usual, furnished the last thrill of the afternoon. North-

Gearing Is Topic of Evening Class Talk

Arranged by Mr. Gatty, machine shop instructor in the evening school, a talk on gearing was presented to the machine shop class last Friday. Mr. J. H. Davey of Browne and Sharpe Company was the speaker.

ern Illinois had a big lead when Nelson, Armour anchor man, took the baton. He reduced the lead to a point where, on the home stretch it looked as though it would be another victory for Armour. Despite his heroic effort Nelson finished behind his opponent.

Summaries

100-yard Dash—Won by Trakas (N.I.); second, Nori (N.I.); third, Dunbar (A.). Time, :10.3.

100-yard High Hurdles—Won by Roberts (A.); second, Hand (N.I.); third, Fleig (A.). Time, :14.1.

Shot Put—Won by Cowan (N.I.); second, Hein (N.I.); third, Roberts (A.). Distance, 42 feet.

100-yard Run—Won by Faust (A.); second, Yeakel (N.I.); third, Baker (N.I.). Time, 4:55.1.

440-yard Run—Won by Hein (N.I.); second, Neal (A.); third, Baeles (N.I.). Time, :54.7.

High Jump—Bejeck, Nelson, Thornton (A.), tied for first. Height, 5 ft., 8 in.

100-yard Low Hurdles—Won by Hand (N.I.); second, Roberts (A.); third, Shartz (N.I.). Time, :12.1.

220-yard Dash—Won by Nori (N.I.); second, Trakas (N.I.); third, Russel (N.I.). Time, :23.7.

880-yard Run—Won by Nelson (A.); second, Hein (N.I.); third, Tuma (A.). Time, 2:14.5.

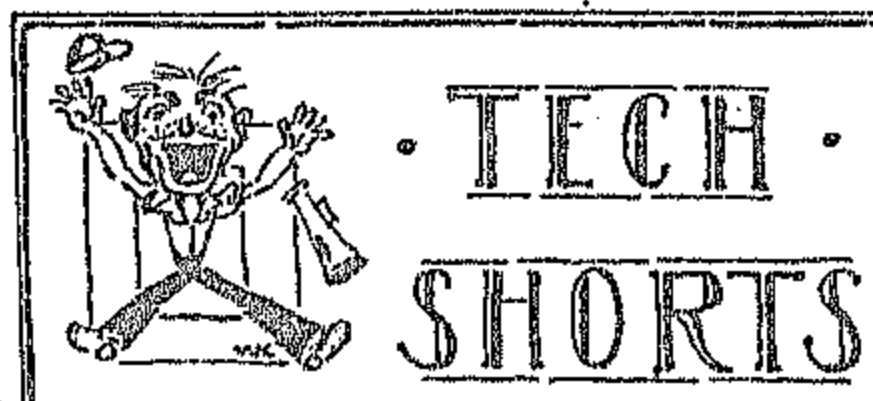
Two-mile Run—Won by Baker (N.I.); second, Faust (A.); third, Bagg (N.I.). Time, 10:53.9.

100-yard Dash—Won by Northern Illinois. Time, 2:19.1.

Discus Throw—Won by Cowan (N.I.); second, Roberts (A.); third, Trakas (N.I.). Distance, 121 ft., 8 in.

Javelin Throw—Won by Concidine (N.I.); second, Peters (N.I.); third, Roberts (A.). Distance, 149 ft., 7 in.

Pole Vault—Won by Eustace (N.I.); second, Concolino (A.); third, Hevrdjes (A.). Height, 11 ft.



Perhaps this is a bit post season, but sometimes we just can't help bragging about the athletic prowess of our own faculty members or students. The following, was taken from the "This Month's Yesteryear Calendar," column of the "Chicago Magazine" for April, 1935.

April, 1903 "A huge mass meeting was held in Kent Theatre to celebrate the National Basketball Championship presented to the University of Chicago by captain John Schommer's quintet, after winning from Pennsylvania by a score of 16 to 15. Schommer personally rolled up 275 points during the season."

Pentathlon contestants will be shooting at the following marks for a perfect score—5,000 points:

100 yd. dash—:10.0.
Shot put—48 ft. 7¾ in.
100 yd. high hurdles—:14.0.
Broad jump—21 ft. 8½ in.
888 yd. run—2:00.9.

These, by the way of info., are school records accumulated through the years.

Last year John Roberts, with 4,287 points, and Alex Kulpak, with 4,086, copped the honors in the lettermen's event. Bruno Rigeni, 2,358, and Joe McGrath, 3,896, took the medals in the non-letter division. They exceeded about 20 contestants.

Broad Jump—Won by Nori (N.I.); second, Kulpak (A.); tied for third, Nelson (A.) and Neal (A.). Distance, 22 ft., 2½ in.

Tech Wins from Loyola Netmen

Last Monday the Tech netmen defeated Loyola University, four matches to three, on the Loyola courts in the second game of the season. Armour captured three of the five singles events and split with the North Siders in the doubles. Richardson of Loyola defeated Lammers of Armour after a close fought battle. Esbensen, Schmidt, and Freund, all of Armour captured their respective matches with great ease. Dick Armsbury lost to Crowley of Loyola by a very narrow margin. In the doubles, the Tech combination of Lammers and Freund lost to the Loyola team, but the Armsbury-Esbensen duo evened this loss by winning easily by 6-0, 6-1.

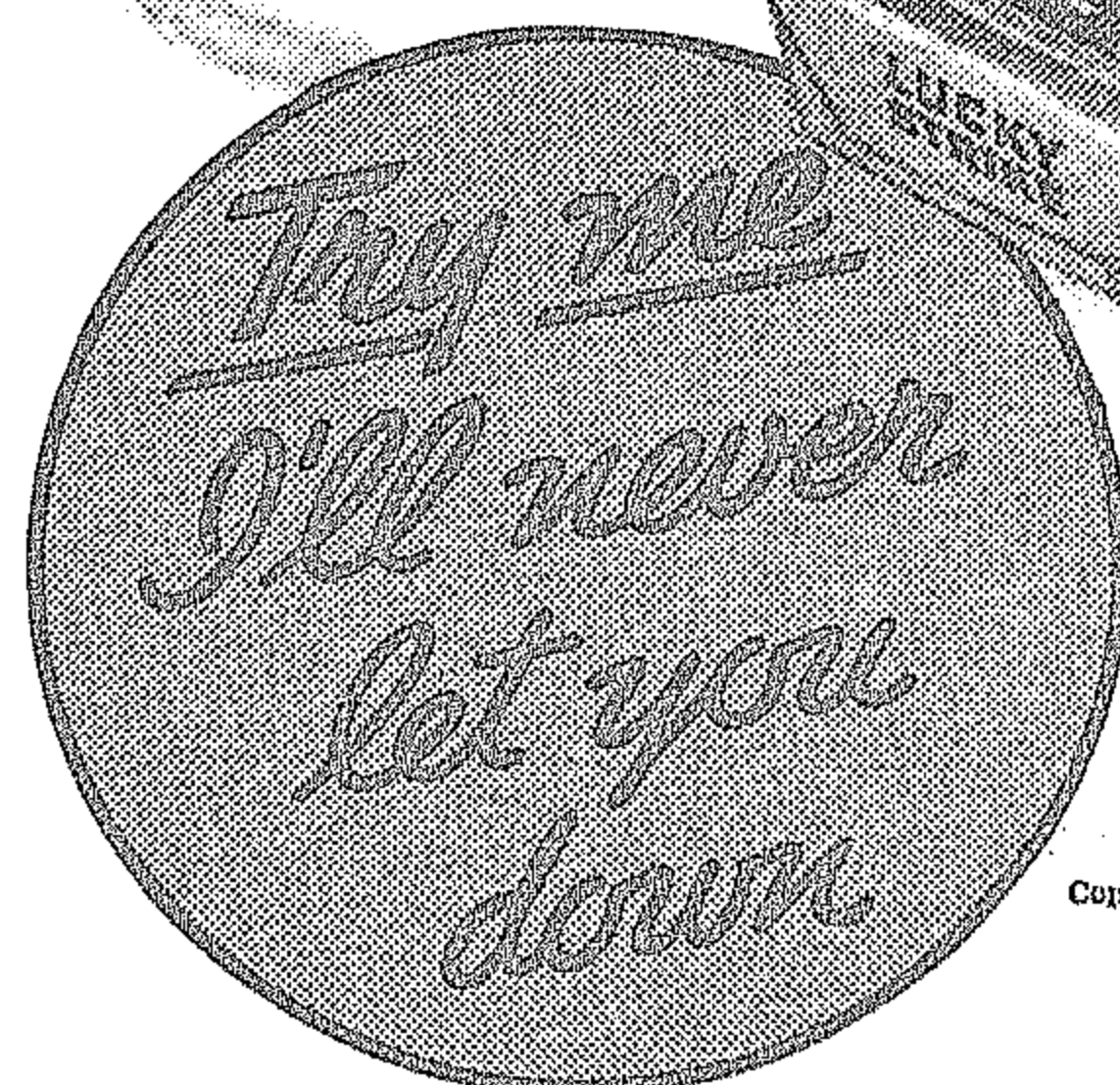
Next Friday and Saturday the racquetballers will travel to Greencastle and Terre Haute to engage with the DePauw and Indiana State Teachers College contingents. Last year the De Pauw match resulted in a 4-3 victory for the Techawks on the home courts after being rained out at Greencastle earlier in the week. The Indiana State Teachers' team is an unknown quantity as far as previous records are concerned because they have never been matched against Armour.

while already 30 men have entered this year's event—bigger and better! (?)

North Central, due here Wednesday for a ball game, set the Techmen down 16-3 in a game played at Naperville. The Demons pushed five runs across in the first. The "Lugan" Lauchiskis rates big mention for his home run and two out of four at bat.

Above all
I'm your best friend
I am your
Lucky Strike

Others may disappoint. I never do. I'm always mild, always fine to taste—because I'm made of fragrant, expensive center leaves, only. Turn your back on top leaves. They're raw, bitter, stinging. Turn your back on bottom leaves. They're coarse, sandy, grimy. Before I consider it worthy, every leaf must be a center leaf, mild, fine-tasting, fragrant. I do not irritate your throat. Above all—I'm your best friend.



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