

ELECTRON CAN BE HEARD NOW

Experiments by Scientists Advanced to Remarkable Point, Dr. Hull Declares.

ANN ARBOR, Mich. (AP)—Experiments by which scientists have been able to detect the presence of electrons, the smallest particles of all matter, were described today by Dr. A. W. Hull of the research laboratory of the General Electric company at the annual meeting of the American Physical Society.

The vacuum tube amplifier in which the magnification is carried to a hundred-thousand fold, and with which a million fold can be reached, makes this possible. Dr. Hull stated that the sound produced by the electrons is caused by bombardment of the plate by electrons released from the hot filament. It is these electrons, which carry the current and which make the operation of the tube possible. The name is therefore a fundamental property of electron emission, a characteristic of the electron, according to Dr. Hull. The experiments have been conducted jointly by Dr. Hull and Dr. H. H. Williams of the University of Michigan at the university.

The noise, due to the electrical oscillation which is set up by the impact of the individual electrons on the plate, is known as the "shot effect." The energy of each blow is extremely minute, but, when many individual impacts add, and their sum becomes very large. With sufficient amplification, Dr. Hull stated, the blows may produce a roar like that of Niagara.

The electron is the unit of charge of electricity and the acceleration of its velocity is of the utmost importance. The oil drop method, devised by Professor Millikan in the physics laboratory of the University of Chicago, made possible the first accurate measurements of the charge of the electron. Accurate as the experiments are, however, it is desirable that they be checked by some independent method.

Millikan's method of measuring the charge of an electron is based on the influence of gravity and of electric charges on minute oil "droplets." These droplets are so small that the effects of gravity cannot be felt until they are a quarter of an inch in ten seconds.

In the formation of these small droplets with an atomizer, occasionally one becomes charged by friction. It may carry an additional electron. If then the droplet is between two electrically charged plates it will be held up. If the droplet is not charged it will fall. The charged particles will fall, which are not charged will fall. The charged particles will be attracted to the positive plate. By the use of the proper voltage between the plates, these charged particles can be made to fall more slowly, held stationary, or caused to move upward. If two electrons, instead of one, are held by the droplet, the effect is doubled. Measurements made by this method give the value of the electronic charge very exactly. In recognition of the importance of this work, the Nobel prize in science for last year was awarded to Professor Millikan.

Doctors Hull and Williams have measured the charge of the electron in a different way. By means of the shot effect, and have obtained a result for research which promises to add to the knowledge regarding the electron and its properties.

It was not such a long time ago that the electron was unknown. The speaker declared, first scientists had the molecule, then no small that man's ability ever to see even one of the largest atoms. Doubtless, then came the atom, the minute integral part of the molecule. For a long time the atom was considered as the ultimate particle of matter. But each element presents a different atom. Science was not content to rest. It sought to connect all phenomena, and the

GIVE TURKEY DAY DINNERS

COVE (Special).—Thanksgiving day dawned bright and clear. The services were held at the Methodist Episcopal church at ten o'clock.

Many dinner parties were held at the various homes. One of the largest as well as one of the most delightful, was held at the home of Mr. and Mrs. H. E. Dill. Dinner was served in their ample home. The house, when not in use for the storage of fruit is a large hall suitable for a dining hall or any other purpose. The hall was beautifully decorated in fall flowers and when the tables were set, made a picture worthy of an artist. Fifty guests were seated at the feast and were as follows: Mr. and Mrs. Clyde Robinson and family, Mrs. Bannock, George and daughter, Mrs. Mayo, Mr. and Mrs. Earl Malloy and sister, Royce of Walla Walla, Wash., Mr. and Mrs. Floyd Young, Mr. and Mrs. Clark Sharp and children and Mrs. Gus Reed of La Grande, Mr. and Mrs. M. L. Carter, Mr. and Mrs. Elmer Pulp and daughter, Mrs. Albert Brantley, Mr. and Mrs. Wesley Smith, Mr. and Mrs. H. G. Hank and children, Mr. and Mrs. W. E. Hays and family, Mr. and Mrs. L. H. Jones, Mrs. H. Hays, Mr. and Mrs. H. H. Holt and daughter, Wanda, and the hosts and hostesses, Mr. and Mrs. Dill and Mr. and Mrs. Roy Dill.

Mr. and Mrs. E. C. Reed entertained at dinner. Mr. and Mrs. T. C. Kelly were the guests.

The dinner party, consisting of the hosts of Mrs. A. C. Gosholt, daughter of Mr. Albert Conklin, Mr. and Mrs. T. C. Conklin, Mrs. H. C. Reed and Mrs. Constance Reed, Mrs. Esther Saunders, Mrs. Ethel Quimby and H. E. Dill.

Mrs. Mae Kelly entertained at dinner her own immediate family, Mr. and Mrs. A. H. Olson and daughter, Wanda Kelly.

There were Thanksgiving services at the L. S. church in the morning at eleven o'clock. Mrs. J. H. Olson being the speaker. After the services dinner was served at one o'clock. The afternoon was given over to the children's dancing party and was a very happy affair for the small folk. In the evening a dance was held where the public was invited and proved to be a most enjoyable event.

Mr. and Mrs. L. N. Conley were host and hostess at a small dinner that included Mr. and Mrs. J. J. Conley and Mr. and Mrs. L. B. Carter.

After a long painful illness Mrs. Minnie Millard passed to her rest on the morning of November 27. Minnie Millard Keopke, Millard was born in Berlin, Germany, January 10, 1867. She came to the United States in 1885 and to Winona where she was married to Edwin Millard at the age of eighteen. They have resided in Cove since 1887. Beside the husband to mourn her loss there is a daughter, Mrs. Jennie E. Porter of Yakima, Wash., and two sons, Frank E. Millard of Cove and Victor K. Millard of Yakima, Wash., and several grandchildren.

A revival meeting at the Baptist church began on Monday with the Reverend Lum Jones, evangelist in charge. The Reverend Magnus of Enterprise assisted in the work for the first three days. Special music was furnished by Miss

OUTBURSTS OF EVERETT TRUE



party were: Mr. and Mrs. Jack Smith, Wilma Smith, Mr. and Mrs. Will Miller and sons and daughters, Ward, Howard, Leonard, Adam, Glen and Alex. Miller, Mr. and Mrs. Ernest Miller and sons, Gilbert and Richard, Mr. and Mrs. Geo. Gray, Otello and Hugh Gray, Mr. and Mrs. Ernest Gray and children, Mr. and Mrs. Chas. Hilbard and children, Mr. and Mrs. Frank Miller and children, Mr. and Mrs. Lynn Clark and children and Mr. Clark Moody.

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It was discovered that all matter is composed of electrons, the different substances resulting from the different properties possessed by the atoms according to the number and arrangement of the electrons they contain.

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Ry Condo

Mr. and Mrs. J. N. Stinson, who have been visiting their parents, left Monday for their home in Seattle, going by way of Yakima, Wash., where they will spend a few days.

Mrs. J. E. Dean, who is convalescing from a long and serious illness, left on Thursday for Portland to spend a few weeks with her sister, Mrs. J. D. Smith. She will later continue her journey and spend some time with her sister, Mrs. Florence Meyer at Seattle, and Mrs. G. Roberts at Tacoma.

Mrs. Ida Gray, who has been with Mrs. Dean since the beginning of her long illness, left with her for her home in Tacoma.

Mr. and Mrs. Cyril Richardson of Pendleton spent a few days at the home of Mr. and Mrs. L. M. Laird.

Mr. and Mrs. Joe Dobi of La Grande were guests of Mr. and Mrs. J. H. Houston early in the week.

Mr. and Mrs. E. R. Conklin and

Young, soloist, accompanied by Miss Winchell, pianist, both of Enterprise, Reverend Ransom of La Grande will assist in the work beginning on Saturday.

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La Grande	5:20	12:20	5:20	
Imbler	9:00	3:00	4:00	1.50
Elgin	9:20	3:20	4:20	1.00
Minam	10:00	3:40	5:00	1.75
Wallawa	10:40	4:20	5:40	2.25
Lostine	11:00	4:40	6:00	2.00
Enterprise	11:20	5:00	6:20	2.00
Joseph	11:50	5:30	6:50	2.25

Ten per cent discount on Round Trip Tickets.

LEAVE	No. 2	No. 4	No. 6	Fare
Joseph	7:30	10:25	2:30	
Enterprise	7:50	10:50	2:50	1.25
Lostine	8:15	11:15	3:15	.66
Wallawa	8:35	11:35	3:35	1.00
Minam	9:15	12:15	4:15	1.60
Elgin	10:00	1:00	5:00	2.25
Imbler	10:20	1:20	5:20	2.25
La Grande	10:50	1:50	5:50	2.25

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WINNIPEG, Man. (AP)—Trees at the rate of 20,000 a day have been planted by farmers of western Canada in the last 26 years, according to a report of the department of agriculture.

A total of 150,000,000 young trees, the report shows, have been distributed free to farmers in that

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