



Myset at 3









Harvey

Gene

Francis

Calvin
Milton



Ad Anderson,

21 N. J STREET.

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Provo City.
Utah.

Zoe Eula /





HARRY

CALVIN









THREE-YEAR COLLEGE GRADUATES

CLASS OF 1907

Hans C.
Peterson

George R.
Hill

Harvey
Fletcher

Robert H.
Sainsbury

Georgia
Hoagland

Franklin S.
Harris





Peterson

E Jacobs

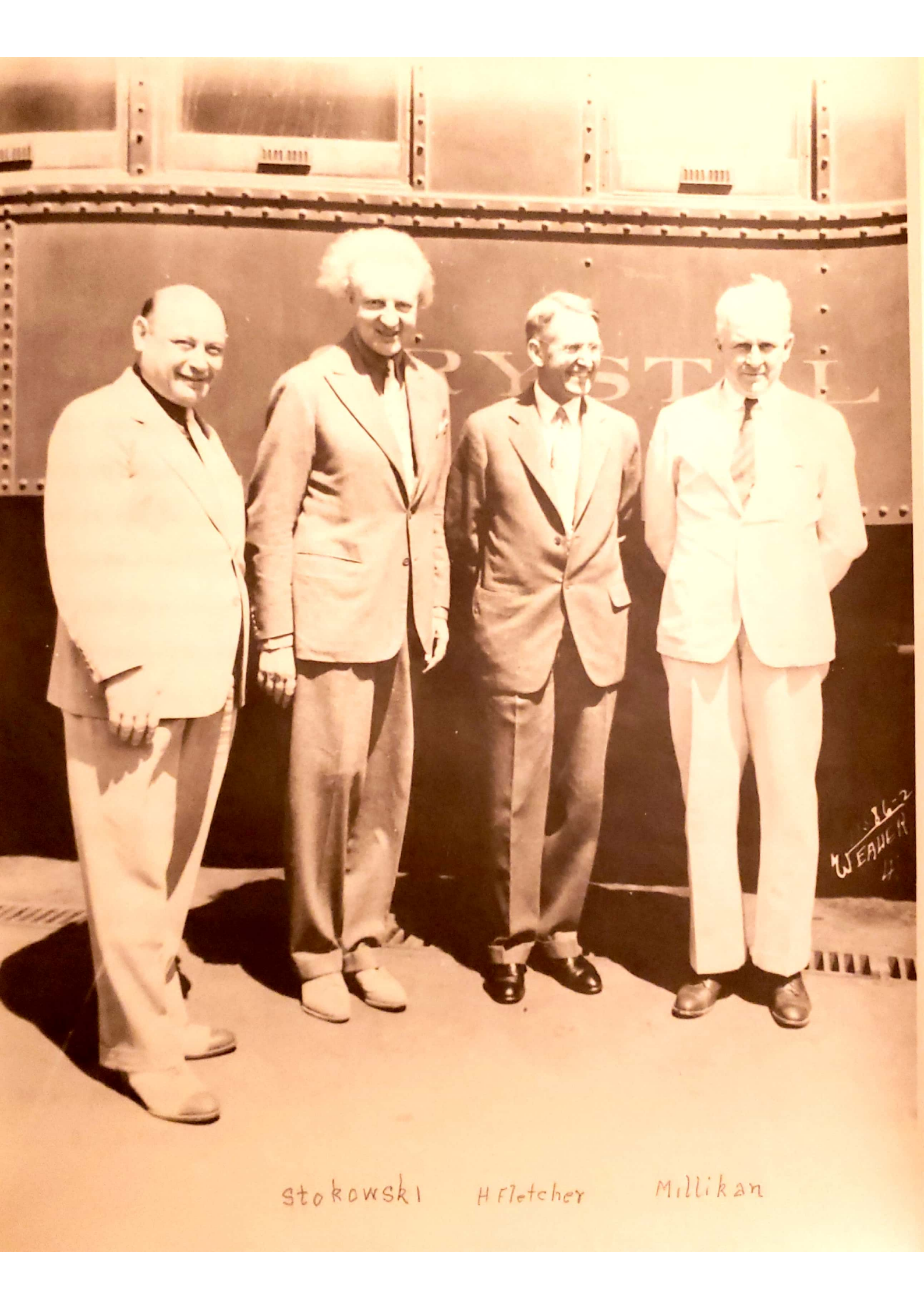
Senator Watkins
& Jacobs

Watkins

H Fletcher

Walsh





36-2
WEAVER
4

stokowski

H Fletcher

Millikan





Stephen



Stephen

Phyllis





Steve







RELATES EXPERIENCE

I am thinking of your opportunity to divide—to divide with someone else as your instructors have with you. Let me tell of the little incident that I experienced. I had been quite familiar with the life of Michael Pupin, one of the great physicists and one of the most important men in Columbia University. He was a scientist and had established his faith in God. One time when I was in the city of New York I decided I would like to obtain his viewpoint. I told Harvey Fletcher, who was then and is now a physicist in the Bell Telephone laboratories in New York, that I would like to know Dr. Pupin better. He said that he would find somebody who could arrange a meeting. I told him that I was going to Boston for a few days, but if the opportunity presented itself for me to meet Dr. Pupin to let me know and I would return at once. I had been in Boston only two days when I received a telegram to come at once to New York to meet Dr. Pupin. I returned and Harvey Fletcher and myself were invited to Dr. Pupin's apartment to dine with him.

He was a great character. He had received some of his education in Europe and later in America.

One day in his youth his mother called him to her and said: "Michael, I want you to go to school in Prague."

He was a Yugoslavian. He replied:

"I prefer to work with father

on the farm. I think he needs me."

She said then with great earnestness: "Son, I don't want you to grow up to be blind as I am."

"But mother," he said, "you're not blind."

She instructed him to bring her a book and looking at it, she said: "What does that say?"

He read it to her and she said, "I cannot see that."

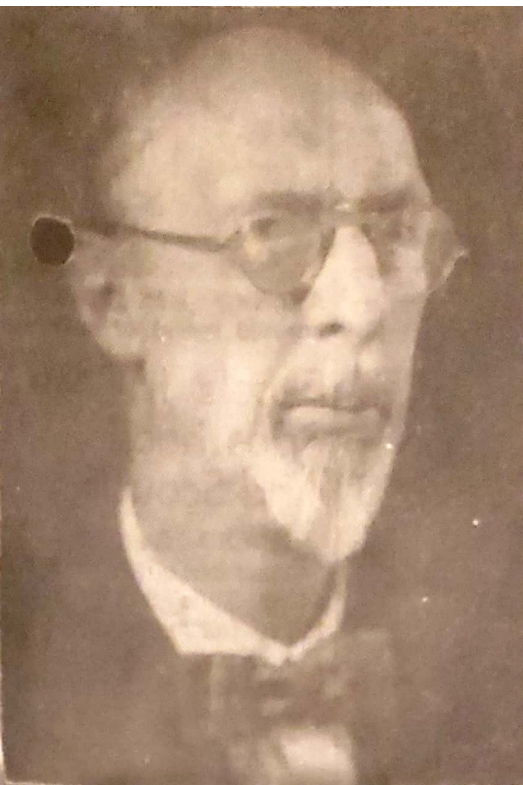
It was then he understood that she meant she was blind because she couldn't read. Michael Pupin went to Prague and later came to America. When he arrived he was just a poor boy with less than a dollar in his pocket. The immigration officials weren't going to let him into the country because he didn't have enough to take care of himself until he could get a job and earn some money. They asked him if he had any relatives in America. He said that he did not. Then they asked him if he didn't have any friends here.

He thought a moment and then replied, "Yes, I have two, Benjamin Franklin and Harriet Beecher Stowe."

Both had been dead several years. The officials were so struck with his statement that they asked him:

"Is that the kind of company you have been keeping over there?"

He said, "Of course. If they were good enough as friends over there they should pass over here." The officials admitted him and as a result he later became a citizen of the United States and one of the world's great scientists.



Pres. George Albert Smith of the Council of the Twelve who delivered baccalaureate address to U.S.A.C. graduates at Logan, Utah.

FAR-REACHING INFLUENCE

As we sat at the dining table enjoying his hospitality, Dr. Pupin talked about his experiences and how Robert A. Millikan became his student. He discovered his genius and was interested in his possibilities. When he finished at Columbia Millikan proposed to secure employment in New York but Dr. Pupin advised him to find someone who would lend him some money to go to Europe and complete his education. Millikan said that he doubted that anybody would lend him any money because he thought he didn't have enough background. Nevertheless, after some persuasion, he went out to try to obtain the money. After a few days he returned empty-handed.

He said, "See, I told you that no one had enough faith in me to lend me any money."

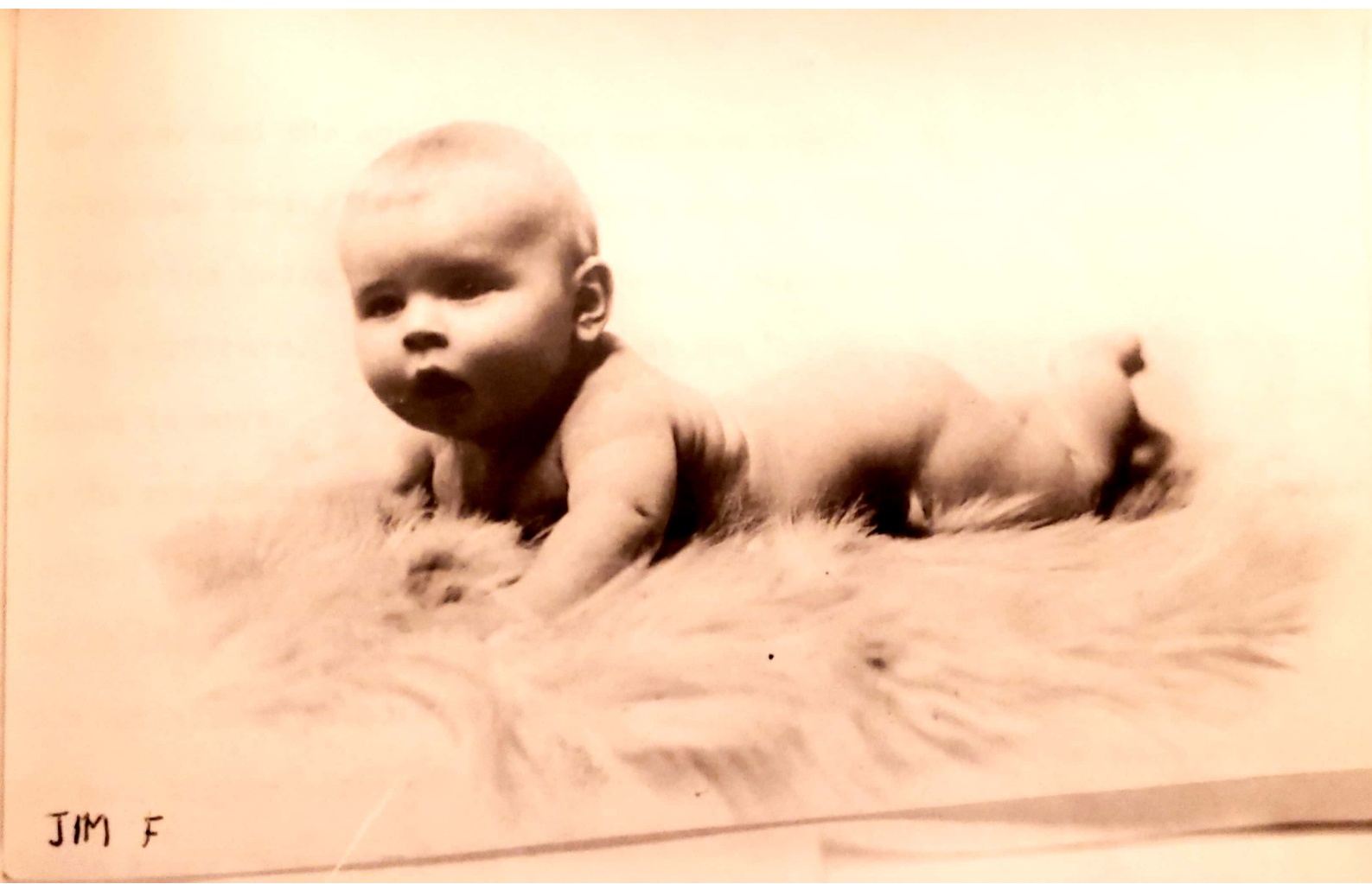
Pupin said, "Well, I have faith in you and I will lend you the money."

Then Dr. Pupin turned to me and said, "See what I gave to the world—it's greatest physicist."

Then Harvey Fletcher said "You may be interested to know that it was Dr. Millikan who gave me my start and opportunity and enabled me to become what I am today."

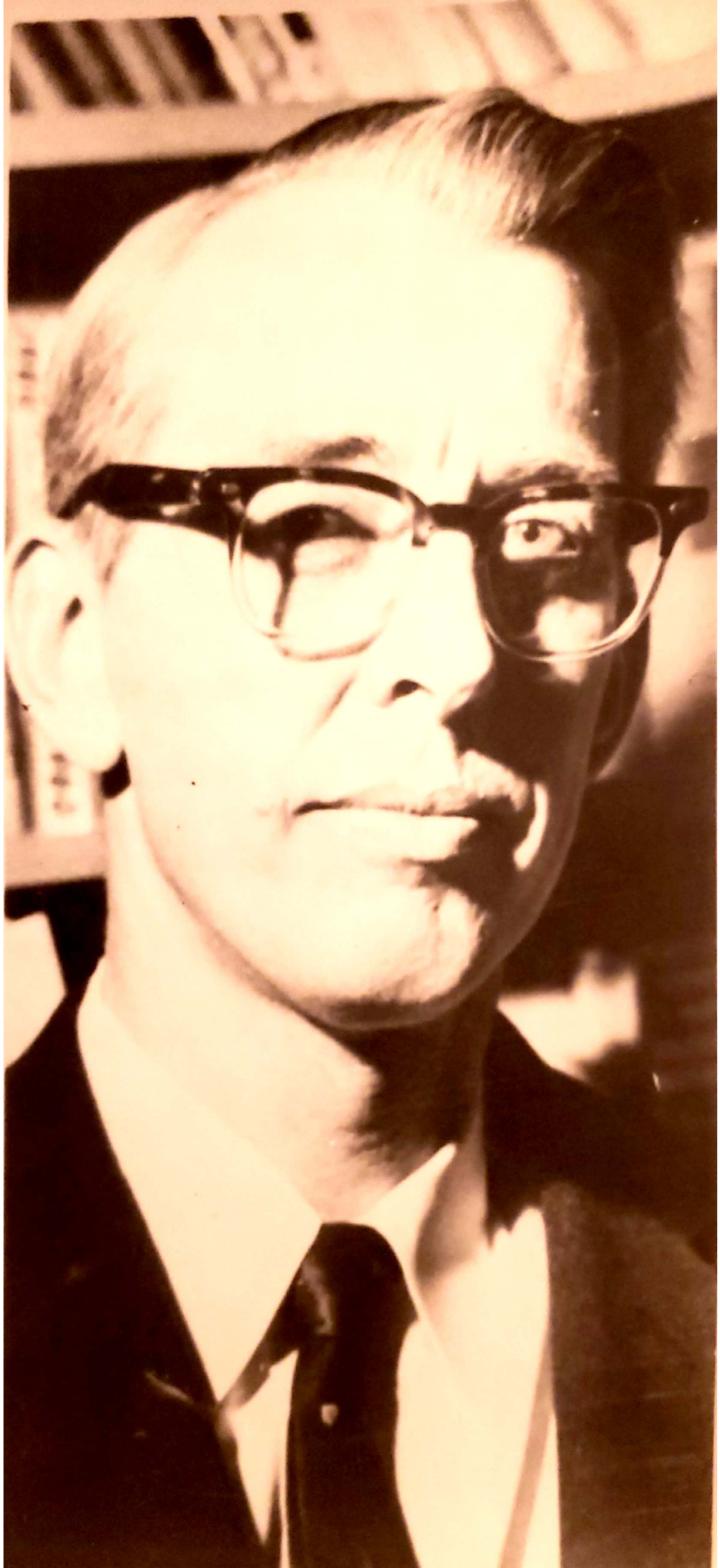
Dr. Pupin was more than pleased to learn that he had been instrumental not only in giving the world a Millikan but also a Fletcher who has three fine sons following in his footsteps going to school at Harvard and Massachusetts Institute of Technology. This is what I mean by dividing your opportunities with others.

Today I am thankful that I am here with you. You are just starting out to make a record for yourselves and I hope that I may have the pleasure of becoming acquainted with those



JIM F







Bab



Harvey



Paul (Pet)



Standard Flashlight Co. &
1595 BROADWAY, NEW YORK

First Floor, N.Y. Overlook Green, 4th Ave. N.Y.

Call Address "Edison, New York"

*From the Laboratory
of
Thomas A. Edison,
Orange, N.J.*

June 17, 1929.

Mr. Harvey Fletcher, President,
Acoustical Society of America,
463 West Street, New York City.

Dear Mr. Fletcher:

Your letter of May 21st was forwarded to me at Fort Myers, Florida, and I assure you that I feel highly gratified and honored that the Acoustical Society of America have, by unanimous vote of the Executive Council, chosen me to be the first honorary member.

Naturally, I am greatly pleased to be offered this place of honor and I am very glad indeed to accept the membership which you have so kindly offered me.

Yours very truly,

Thos A Edison.

SAHINS, WHO HAVE MADE GOOD BACK EAST

This Book's Sketch — Dr. Harvey Fletcher — By Roscoe A. Grover



Dr. Harvey Fletcher

[illegible][illegible]

The results of the investigations conducted by the Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture, are of such a nature as to indicate that the use of the "World War" brand of insecticide is not only safe but also highly effective. The use of this insecticide is recommended for the control of the pest which has caused the loss of the crop in the past. The use of the "World War" brand of insecticide is recommended for the control of the pest which has caused the loss of the crop in the past. The use of the "World War" brand of insecticide is recommended for the control of the pest which has caused the loss of the crop in the past.

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The Bulletin

of Sigma Pi Sigma

Issued by the Executive Secretary at intervals as a means of making official announcements and presenting information of interest to the society.

VOL. VII

JANUARY 14, 1937

No. 1

CONTENTS

ANNUAL SIGMA PI SIGMA LUNCHEON AT A. A. A. S. MEETING
ATLANTIC CITY MEETING OF THE EXECUTIVE COUNCIL
CHAPTER DUES
FINANCIAL REPORTS

Sigma Pi Sigma Members Prominent Officers in Professional Societies



FRANK C. WHITMORE

NAMED PRESIDENT-ELECT OF THE AMERICAN CHEMICAL SOCIETY FOR 1938

Dean Frank C. Whitmore, of the School of Chemistry and Physics at The Pennsylvania State College, and an active and interested member of Gamma Chapter, has been elected president of the American Chemical Society for 1938.

He also recently received the William H. Nichols medal, given by the New York Section of the American Chemical Society for outstanding research work.

Dr. Whitmore has been a director of the Chemical Society since 1927. In 1932 he held the vice-presidency of the American Association for the Advancement of Science.

He came to Penn State in 1929. Gamma Chapter will join in honoring him at a School dinner on January 14.

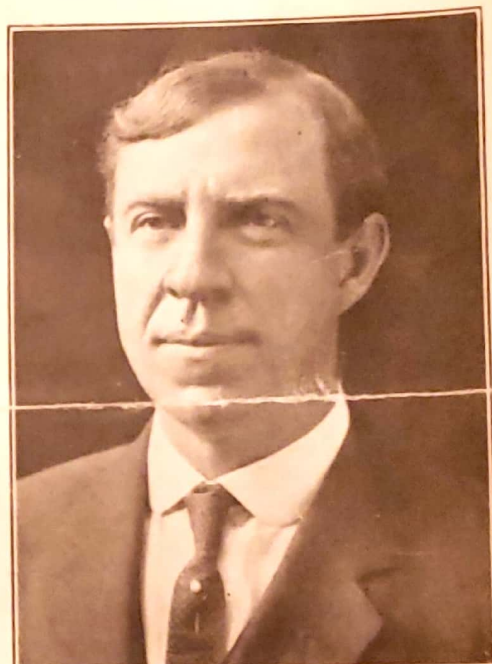


HARVEY FLETCHER

SELECTED AS VICE-PRESIDENT OF SECTION B OF THE A. A. A. S.

Our most recently initiated honorary member, Dr. Harvey Fletcher, Director of Physical Research at the Bell Telephone Laboratories, has again received deserved recognition by election as vice-president of the physics section of the American Association for the Advancement of Science. It is in this section that Sigma Pi Sigma is an affiliated society. Dr. Fletcher will deliver the vice-presidential address at the annual meeting of the Association next Christmas at Indianapolis.

Dr. Fletcher, who received his bachelorate at Brigham Young University and his doctorate at Chicago, is famous for his research work and writing in the field of acoustics, speech, music and sound. A biographical sketch concerning him was given in the September, 1936, number of *The Radiations*.



F. K. RICHTMYER

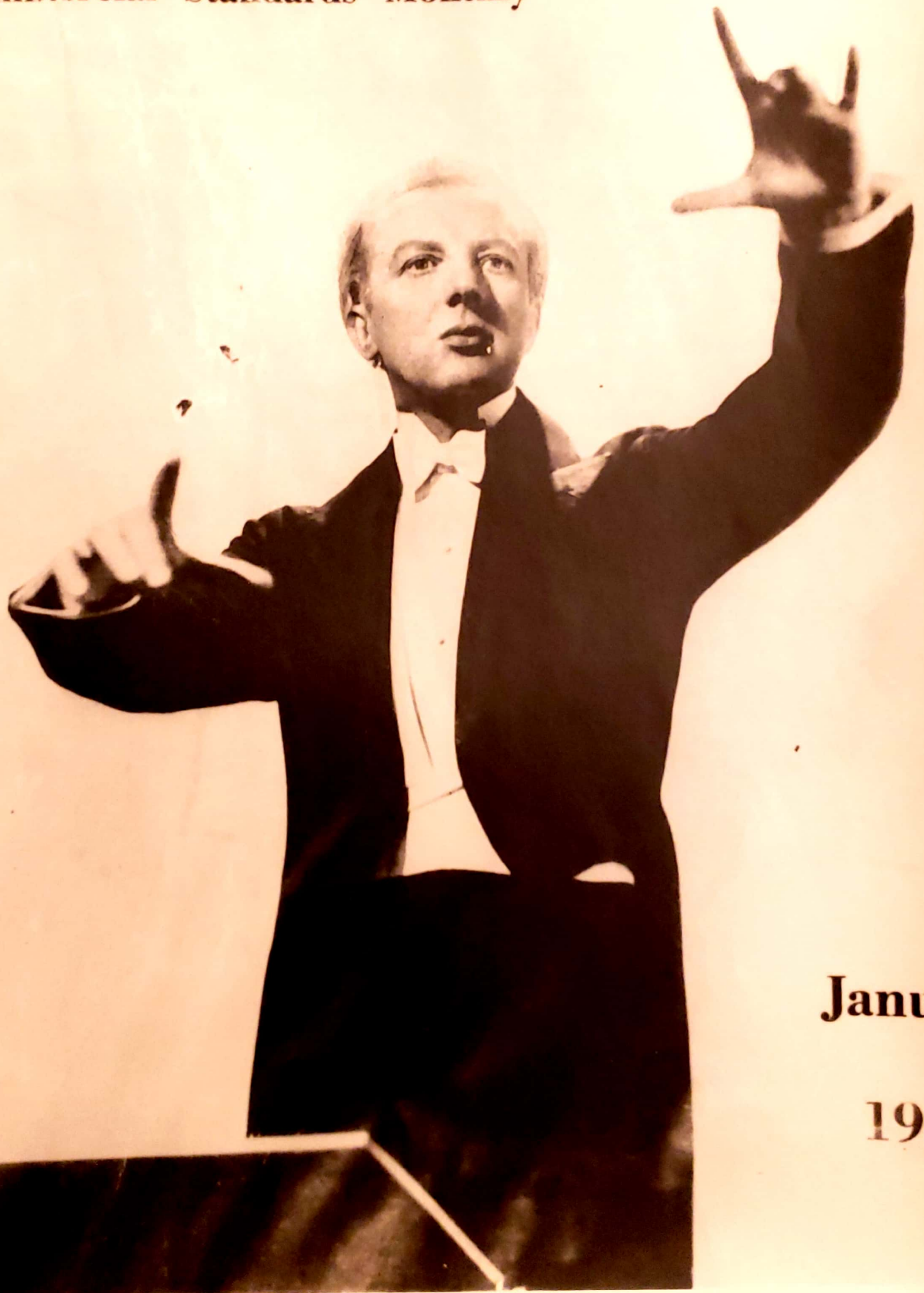
STEPS FROM PRESIDENCY OF PHYSICAL SOCIETY TO SIMILAR HONOR IN ASSOCIATION OF PHYSICS TEACHERS

The unusual situation of assuming the presidency of the American Association of Physics Teachers immediately upon retirement as president of the American Physical Society is the distinction which has come to one of our honorary members, Dean F. K. Richtmyer, of Cornell University. At the Atlantic City luncheon of Sigma Pi Sigma members and guests, Dr. Richtmyer was our guest of honor.

The well-known researches of Dr. Richtmyer, lately in the field of x-ray spectroscopy, have gained for him an enviable position among American physicists. His reputation as an inspiring teacher is equally high. He has spoken at a number of our chapters and his advice has frequently been helpful in the formulation of our national policies. Gamma Chapter initiated him into our membership in 1930.

Industrial Standardization

and Commercial Standards Monthly

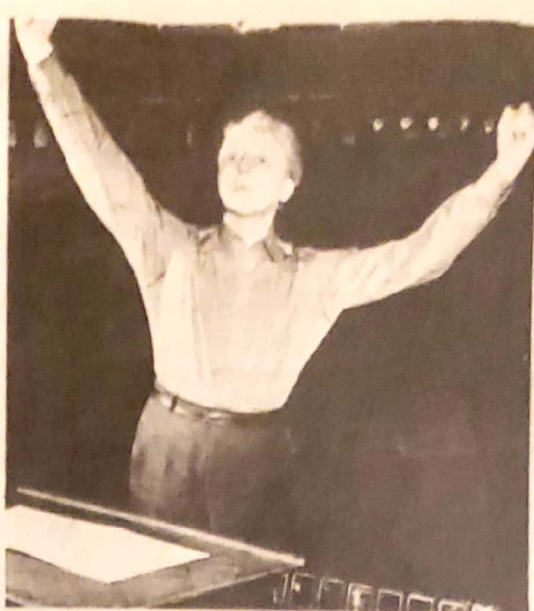


January

1937



"STRINGS and woodwinds—together," the conductor gestures during exacting rehearsal.



"PESANTE!" Stokowski signals to the double basses. He wears blue shirt at rehearsals.



"CANTARE"—first violins. Nuances of expression and gesture guide musicians in playing.

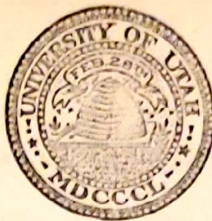


"MARCATO"—trombones. He seats brasses at right rear instead of usual back center.



"READY"—TRUMPETS. His most frequently used phrase during rehearsals is "Watch me." Every eye in the orchestra concentrates on the vibrant, dramatic directions of arms and hands.

OFFICE OF THE PRESIDENT
—
LEROY E. COWLES, PRESIDENT



UNIVERSITY OF UTAH
SALT LAKE CITY 1

May 24, 1944

Dr. Harvey Fletcher
Bell Telephone Lab. Inc.
Murray Hill Laboratory
Murray Hill, New Jersey

Dear Dr. Fletcher:

We are looking forward with a good deal of happiness to your visit with us at Commencement time. I presume that you will arrive in time to take part with us in the Baccalaureate Service, Sunday afternoon, June 4, and to attend the tea given jointly by the University of Utah Women's Club and the President and his wife.

On Tuesday, June 6, we have arranged for a luncheon immediately after the Commencement Exercises. We hope that you will accept the invitation to take lunch with us on that occasion. I am hoping, too, that you will bring your wife with you and that she can also attend the tea and the luncheon.

Very sincerely yours,

Leroy E. Cowles
President

Feb 11 1946

* NEWSWEEK

Noted Inventor, Dr. Fletcher Honored Today

Dr. Harvey Fletcher, director of research, will be honored at today's assembly for the part he played in the development of stereophonic sound, which is currently being used in cinema-movie movies.

This assembly will be a demonstration of how stereophonic sound works and in many ways will be a duplicate of the first demonstration of the system on April 27, 1933. That first demonstration was under the direction of Dr. Fletcher, who was at that time director of acoustical research at the Bell Telephone Laboratories.

To Be Broadcast

Part of the program will be conducted from the Smith Auditorium. It will be broadcast in the George Albert Smith Fieldhouse through five loudspeakers spread across the main floor of the Fieldhouse.

Some of the items scheduled on the program in the Auditorium that will illustrate the use of stereophonic sound are an orchestra number, a vocal solo with the soloist walking from one side of the stage to the other, a skit, and a trumpet solo.

Birthday Celebration

Dr. Wayne B. Hales will be in charge of the committee that has prepared the program to honor the 21st birthday of stereophonic sound and Dr. Fletcher, one of the pioneers in its development.

Other members of the committee are Prof. Stewart Grow, Dr. John Halliday, Dr. Harold I. Hansen, Leland Perry, Francis Boyer, Arch Madsen, and Pres. Harvey Taylor.

Mathematical Music

From the long, shallow box came the vibrant diapason of an organ, so strong that it shook the walls of the McMillin Theater at Columbia University. It was followed by the boom of a drum, then the deep voice of a cello, and the ringing tones of a big bell.

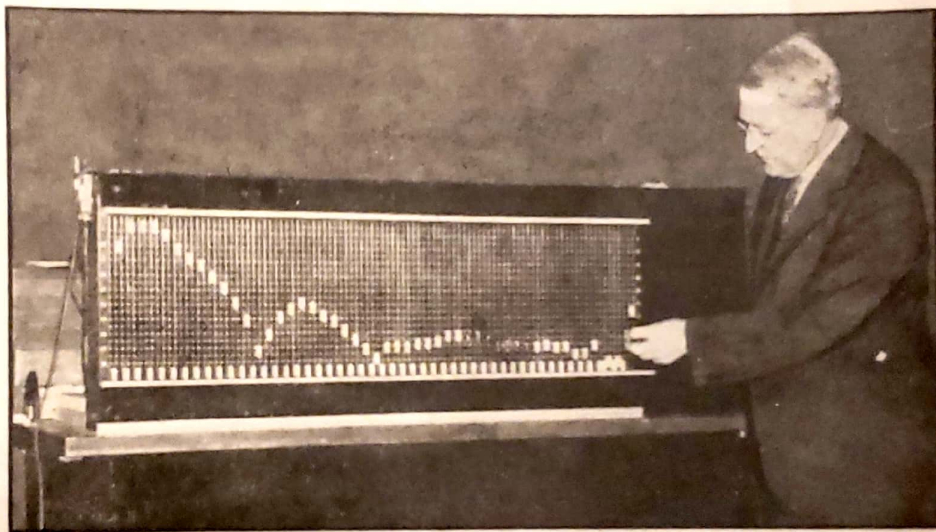
These sounds, precise in tone and quality, were not created by standard instruments. They were reproduced mechanically and mathematically by the tone synthesizer, an electronic device demonstrated last week at the conference of the American Physical Society in New York by Dr. Harvey Fletcher of the Bell Telephone Laboratories.

The machine contains 100 variable potentiometers, connected by wires with electronic tubes. Each represents a different tone quality, so that not only every

tating smooth shaft which records them magnetically, so that when a button is pushed, the sounds registered by the potentiometers are all played at once. The combination is a perfect reproduction of a cello playing the note A.

Experiments with the tone synthesizer have already indicated certain musical characteristics not usually recognized by musicians. Although it is accepted that loudness depends chiefly on intensity of sound, the synthesizer proves it also varies with frequency of the sound waves and with the individual tone quality of the instrument itself. If you take two notes, one octave apart, and starting at the top of the scale, play each one at the same intensity all the way down, the lower notes will decrease in loudness until the lowest cannot be heard by the human ear.

Pitch varies principally with frequency, but it is also affected by intensity of sound and by the instrument's own overtones. And quality, according to the Bell Telephone scientist, depends not only on these overtones but also to a lesser degree on frequency and intensity.



Dr. Harvey Fletcher demonstrates the tone synthesizer

known instrument, plus the human voice, can be accurately reproduced, but also many new tones not made by musical instruments.

From a practical viewpoint, the synthesizer is of value chiefly as a purifier of musical sound. Instead of depending on the human ear, notoriously imperfect, physicists can now select the sound of an instrument and by analyzing the physical factors involved and reproducing these factors on the machine, produce a perfect tone.

The Synthetic Cello: For instance, to reproduce the tone of a cello playing the note A, the operator sets the first potentiometer at 440, the number of cycles in a single vibration of a cello string. The second potentiometer is moved to the position of the first harmonic, 880, and the third potentiometer to the next harmonic, 1,320. All the sounds are then transmitted by electric wires to a ro-

To Weeds It's a Fiend

For years, Department of Agriculture scientists had experimented with a strange, hormone-like chemical—2,4-Dichlorophenoxyacetic acid, or 2,4-D for short. It was a weed poison; yet at the same time it ripened fruit and promoted growth. On vegetation that it destroyed, the chemical acted in a weird manner. Absorbed by the stem and roots, it caused strong organic contortions until the plant literally "died in agony." Leaders of the "poison" experiments in the department's "weed project", who say there is "ample capacity in manufacturers' plants" for production, have announced a wide range of practical uses for 2,4-D:

¶ To ripen bananas more rapidly than after ordinary picking; to speed up the ripening of green apples, pears, and other fruits, and to make apples cling to the



Dr. Harvey Fletcher

Battery Commander; Lieutenant R. E. Rohleder is Executive Officer. I would like to express the thanks of the Laboratories and of the audience to the officers and men of this Battery for their participation in this program.

Dr. Harvey Fletcher, Director of Physical Research, Bell Telephone Laboratories, then took over the speakers' rostrum:

It is probably a common notion that to fire a gun so as to hit a target it is only necessary to point the gun at the target. This, of course, is true in most small fire arms where the target is near so that the time of flight of the projectile is only a few seconds. However, when firing a gun at a target moving with the velocity of an airplane, to follow this procedure would result in misses of two or three miles. It is therefore evident that in order to control anti-aircraft gunfire so as to score hits, it is necessary to make calculations as to how far ahead of the airplane to shoot and how high above it so that the projectile traveling in its curved flight will meet the fast-moving target. In order to do this it is evident that one must take into account the velocity of the projectile as it leaves the gun and the forces acting upon it after that. To perform

these computations by the usual methods, even though all the information could be obtained quickly, would require so long a time that the result would be obtained too late to be of any use. Consequently means must be provided for obtaining the pertinent information and making the calculations very quickly so that the gun may be fired at the earliest possible moment and continuously thereafter.

The apparatus which we are demonstrating today, called the electrical gun director, is a combination of devices for obtaining the necessary information and making predictions for controlling the gun so that projectiles fired from it will meet the moving airplane and explode in its path. As you have heard, these directors are now in production and are being sent to many fighting fronts. We understand they have gone to Fiji, Caledonia, the Aleutians, Sicily, New Guinea and Panama. Thus is fulfilled a dream that some of our engineers had more than three years ago.

It was the defeat of the Allied armies in France that started a number of Bell Labs engineers and research workers thinking about new military devices that might prevent these conquests from spreading. It was then that the idea of the electrical director was born; and within a short time plans were on paper for apparatus which would automatically make anti-aircraft fire control calculations. It has been a long, hard road from those early engineering sketches to the finished directors now coming off the production line.

I wish to add my tribute to that of Dr. Buckley's to this group of experts who were gathered together to do this job, for their wonderful performance, their devotion and enthusiasm in carrying this project to a successful conclusion. During the more critical periods of the work these men were organized into three shifts so that work could proceed continuously 24 hours a day. At all times hours meant nothing to them—they were intent on getting the job out at the earliest possible moment.

The electrical director is associated with a battery of four guns and an optical height finder such as you will see today. It consists of four separate units which are transported in a trailer, namely, the tracker, the

office of the president

fifth avenue
BONWIT TELLER
new york

November the ninth
1939

Mrs. Harvey Fletcher
3206 - 161st Street
Flushing, Long Island, N.Y.

Dear Mrs. Fletcher:

This is rather a belated note, I know, to tell you how much I enjoyed meeting you at the American Engineering Women's Luncheon and how delighted I was with your thoughtfulness in giving me the quilt.

I feel sure you will be interested in knowing that Mother and I sent the quilt to the Museum in St. George, with a little note explaining the circumstances. I know they are just as delighted and grateful as I am.

With my thanks, again, and with kindest personal regards, I am

Sincerely yours,

Horace M. Ollum

HMO:r

Bell Labs' Transistor Marks Twentieth Year of Service

Just 20 years ago the transistor was invented at Bell Telephone Laboratories, research and development unit of the Bell System.

On December 23, 1947, Bell Labs scientists John Bardeen, Walter Brattain and William Shockley showed that a small piece of the element germanium could be made to amplify a speech signal about 100 times. Later, in 1956, the trio was given the Nobel Prize for discovery of the transistor effect.

The invention has resulted in the growth of the multibillion-dollar transistor industry with scores of companies employing hundreds of thousands of people. Transistors are everywhere—in homes, banks, automobiles, factories—even on the ocean and in outer space. They activate radios, TV sets, hearing aids, and telephones. They control industrial equipment, drive wristwatches and power tools; they even drive locomotives. They perform complex calculations in giant computers and process TV pictures from the moon. They even prolong life with "pace-maker" heartbeats.

Transistors have played a vital role in communications and information processing. In telephony the underseas cables, central offices and radio transmitters are either made possible or greatly improved by transistors. Today's giant computers contain over 100,000 transistors, packed together to enable the machine to make millions of calculations per second.

Transistors are able to perform all of the functions of vacuum tubes. They can amplify electrical signals, act as oscillator and control and combine pulses of signals. For practically every application they are less expensive, more reliable, and consume less power than vacuum tubes.

The transistor is not only one of the inventions of the twentieth century; it has also led to a host of advances in scientific fields. For instance, zone refining, invented at Bell Labs by William Shockley, is used to purify transistor materials, and the ultra-pure materials available today are the result of technical and scientific advances. The increased interest in the study of solids has led to other "quantum electronic" devices, such as lasers, masers and light modulators. The study of the surface properties of materials, a field in which transistor technology has played a major role, has opened a point where active atoms can be studied in single layers in one-in-a-million concentrations.

Transistor technology has been



From vacuum tubes, to transistors within protective cans, to tiny integrated circuits—a short history of increasingly efficient amplification of electrical signals. The silicon integrated circuit on the right, one of the latest designs of Bell Telephone Laboratories, contains a total of 22 transistors and other components and helps generate the musical dial tones in the new Touch-Tone telephones. The newest integrated circuits have protective coatings and do not need the protection of a can.

applied to making "integrated circuits"—complete electronic circuits fabricated on one paper-thin wafer of material. An integrated circuit containing 50 to 100 transistors and other circuit elements can fit on the head of a pin.

This miniaturization is important for compact equipment like the telephone; moreover, along with size it means reduction in cost and increase in operating speeds. Today, tiny transistors and other

components in an integrated circuit can perform a function at 100 times less cost and with 1,000 times the reliability of doing the same job with vacuum tubes.

Through the invention of the transistor and its resulting development, the future of our society has been profoundly affected. Better worldwide communications, automatic control equipment and the ability to process large amounts of information are vitally necessary to modern life.

The MESSENGER

A Brief Report from Brigham Young University

Dec.,
1951

A Famous Scientist Comes Home

When Dr. Harvey Fletcher, noted scientist, takes up his duties as research director at Brigham Young University next September, one of the university's most famous alumni will be coming home to his alma mater.

The great acoustics engineer was graduated from BYU in 1907 with a bachelor of science degree. From there he went on to Chicago University where he received his Ph.D. degree, summa cum laude, in 1911. After teaching at BYU until 1916 he joined the Western Electric Company's engineering department which later became a part of Bell Telephone Laboratories. And in that position he has become one of the most honored scientists in the nation.

The important appointment is in line with the policy of President Ernest L. Wilkinson to strengthen the BYU faculty and develop the academic service of the university to the students, Church, industry and the nation.

Dr. Fletcher will headquarter in the new \$2,000,000 Physical Science Building, the finest of its kind between the Mississippi River and the Pacific Coast. The building was largely planned and fostered by Dr. Fletcher's brother-in-law, the late Dr. Carl F. Eyring, who made ample provision for acoustical and other research.

Dr. Fletcher's presence on the campus will mean the advent of a new era in BYU research. Undoubtedly the famous scientist will attract much research to the university which is now well equipped to serve.

Recognized throughout the world as one of the leading acousticians, Dr. Fletcher has patented 18 inventions which have been of incalculable value to the radio, telephone and motion picture industries and to the U. S. military services. They have assisted the deaf to hear and the dumb to speak. He has written 52 major works for professional publications and his new book "Speech and Hearing Communication" will be off the press in 1952. He is undoubtedly one of the most honored living scientists with recognition from numerous learned societies and universities.

For nearly half a century, Dr. Fletcher has contributed immeasurably toward an understanding of the fundamental nature of speech and hearing. The results of his work appear in the design of microphones, equipment for electrical recording of all nature of sounds, and the development of loudspeakers which reproduce sound with high fidelity.

An impressive number of "firsts" run through Dr. Fletcher's career. He was first physics student at Chicago University to receive the high honor summa cum laude; first member of the Church of Jesus Christ of Latter-day Saints to be elected to the National Academy of Sciences; first and only member of the Bell Telephone Laboratories (8000) persons to be elected president of the American Physical Society; first president and co-organizer of the Acoustical Society of America; member of the first executive committee and co-organizer of the American Institute of Physics; first to introduce the group audiometer into the school room and thus start the program of testing the hearing of school children, a practice which is now going on in most schools of the nation.

Dr. Fletcher's work has brought him numerous awards for scientific contributions. These include the Louis Edward Levy Gold Medal presented in 1925 for physical measurement of audition; honorary membership in the American Otological Society; honorary membership in the Acoustical Society of America; the Motion Picture

Engineers Progress Medal Award in 1949, and recognition by the Audio Engineering Society, Franklin Institute, American Society of Speech and Hearing, the U. S. Navy and the U. S. Army. President Harry S. Truman recently honored the Utahn for his scientific contributions to the nation's defense.

Dr Fletcher comes to BYU convinced that he can do much good for the Church university, and has expressed the desire to do his part toward helping a great institution fulfill its destiny.



Dr. Harvey Fletcher, appointed research director



PLAN ENGINEERING SCHOOL—Dr. Harvey Fletcher and Pres. Ernest L. Wilkinson confer on future plans.

BRIGHAM YOUNG UNIVERSE

Tentative In Sessions Th

A department of engineering science is being established at Brigham Young University.

President Ernest L. Wilkinson announced this week that the Board of Trustees has agreed to go ahead on a study for the institution of engineering.

The addition represents one of the most important developments in Utah education in recent years. With the new BYU department, engineering training will be available at all three major colleges.

Dr. Harvey Fletcher, head of Bell Telephone Research Laboratories and lecturer at Columbia University, is expected to participate in setting up the new department. The world-celebrated scientist has been appointed director of research at BYU and will take up his duties at the beginning of the regular school term next autumn quarter.

Fletcher Visits Campus

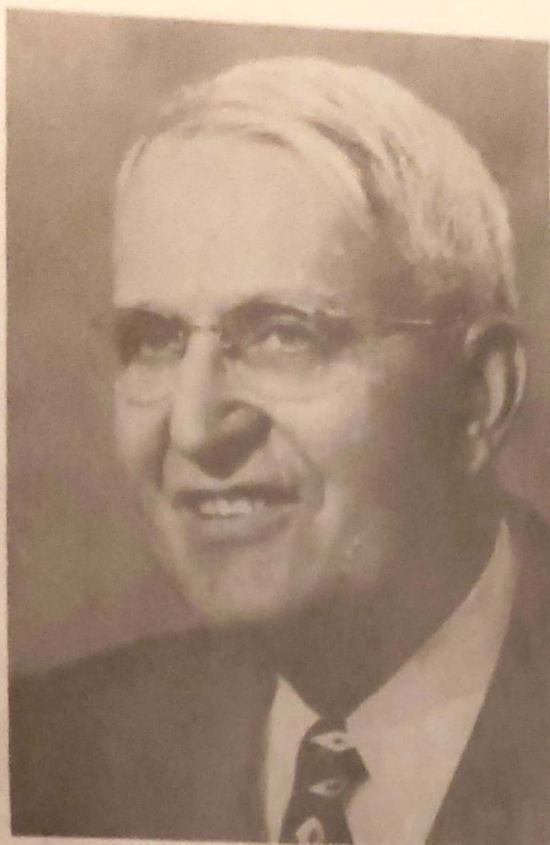
He visited the campus this week for a preliminary survey and expects to visit several times during the summer to direct preparatory activities for research and the new engineering school.

The plan now envisioned by the university faculty would be somewhat of a departure from the usual engineering school setup. Dr. Wilkinson explained that BYU engineering students would receive a liberal arts education as well as technical engineering training. The accent will be on a broad scientific background instead of narrow specialization.

More Liberal Education

"We do not wish to turn out mere technicians," Dr. Wilkinson explained. "We hope to give the BYU-trained engineer better training in liberal education and equal training in engineering subjects."

In order to accomplish this end he pointed out, the course would extend five years. A bachelor's degree would be awarded after four years in engineering science but the fully-trained engineer would have to attend another year to obtain the equivalent of



DR. HARVEY J. FLETCHER
Guest Speaker

Men's Week

April 27 — May 2, 1964

RICKS COLLEGE

REXBURG, IDAHO

ASSOCIATED MEN'S STUDENTS



Men's Week Devotional Assembly

April 27, 9:30 A.M. — Oscar A. Kirkham Auditorium

Organ Postlude	Ruth Barrus
Welcome Remarks	John L. Clarke
	President of Ricks College
Conducting	LeRoy R. Cobia
	President of A.M.S.
Men's Choir	"Jesus My Savior True"
	Combined Men of Ricks and A Capella Choir
	Murrell K. Johnson, Director
Invocation	Steven Nadauld
Men's Choir	"Rise Up Ye Men of God"
Introduction of Speaker	Gordon A. Dixon
	Head of Department of Mathematics and Natural Science
Guest Speaker	Dr. Harvey J. Fletcher
	World Renowned Scientist, B.Y.U.
Presentation	Artell G. Chapman
	Chairman of the Division of Mathematics and Natural Science
Benediction	Barry Craven
Organ Postlude	Ruth Barrus

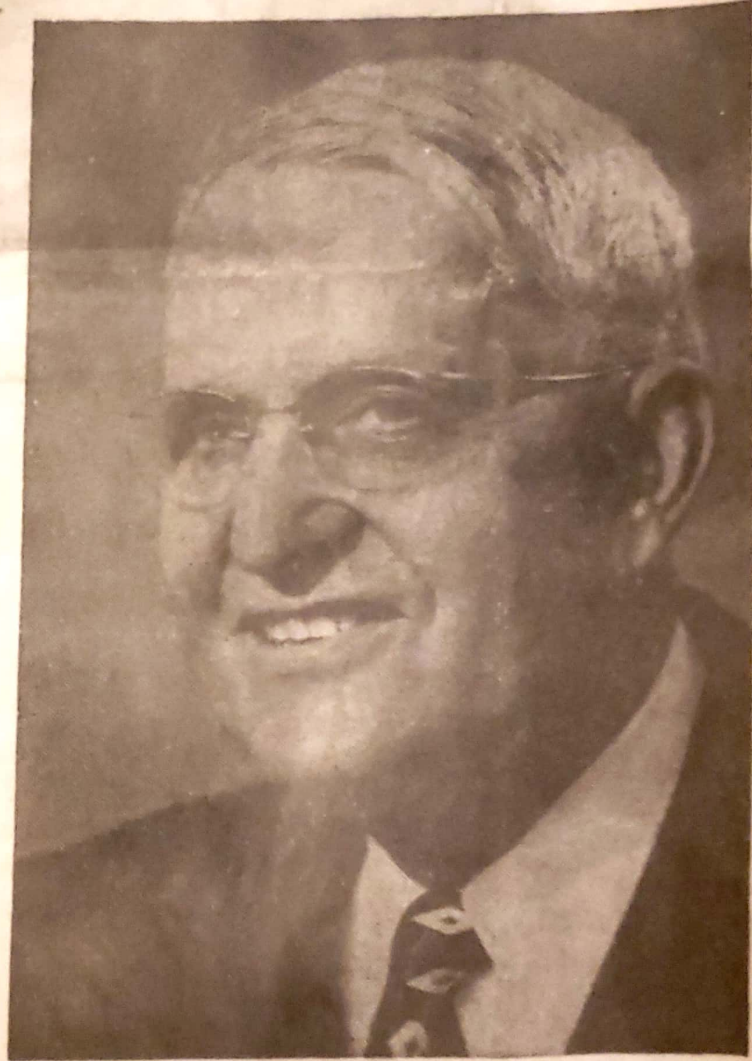
Dr. Harvey Fletcher to be Honored As Ricks College's 'Man of the Year'

Dr. Harvey J. Fletcher, currently professor of mathematics at BYU, will be honored today as the Ricks College Man of the Year.

Harvey J. Fletcher was born in Provo, Utah, September 11, 1884, the son of Charles E. and Elizabeth Miller Fletcher. He obtained his bachelor of science degree at the Brigham Young University in 1907. That same year he went to the University of Chicago to do graduate work and there at the Ryerson laboratory with Professor Robert A. Millikan, he worked on the history-making Oil-Drop Experiment which determined the charge-to-mass ratio of the electron. This was the first empirical proof that electricity is composed of particles having a definite mass and ultimate charge.

In 1911 the University of Chicago granted Dr. Fletcher his Ph.D degree. Following his graduation of University of Chicago he joined the Bell Telephone Laboratory where he took over as director of physical research in 1961. In 1953 he retired and came west to lend his experience and teaching to B.Y.U.

He has been awarded the Louis Edward Levy medal for physical measurements of audition, in 1924, and was the author of **Speech and Hearing** in 1929. He has contributed to papers on electronic charges and theories of hearing.



Dr. Harvey Fletcher, who will be honored as Man of the Year.

DR. HARVEY FLETCHER

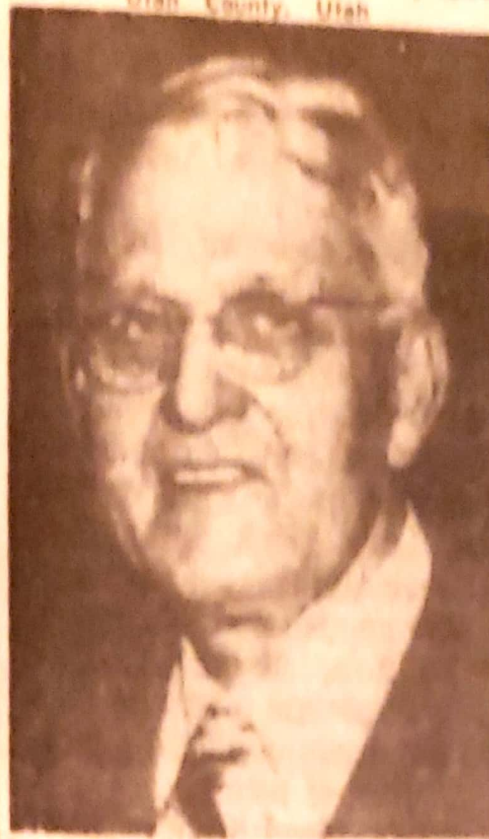
Fletcher Accorded High Award

An international Founders Award has been conferred upon Dr. Harvey Fletcher, BYU professor-emeritus and world-recognized electronics and acoustics authority, by the 150,000-member Institute of Electrical and Electronics Engineers, Inc. He will receive the award on March 22, 1967, in New York City at the annual international convention of the organization.

Dr. Fletcher, still active in research at 82, founded BYU's School of Engineering, coming to direct it in 1952 from the post of director of acoustics research at Columbia University and director of physical research at Bell Telephone Laboratories. His research for the government in World War II ranked him as one of the top scientists in this field.

A native of Provo, he received the B.S. degree at BYU in 1907 and the Ph.D. degree at Chicago University in 1911. Since then seven universities have conferred honorary doctorates on him for his achievements.

He has been called the father of stereophonic sound and was associated with Nobel Prize winner Robert A. Milli-



ken in the discovery of the atomic nature of electricity, which opened up the entire world of electronics.

The Harvey Fletcher Engineering Sciences Laboratory at BYU is named in his honor.

One of the nation's most honored scientists, he has patented a score of inventions which have been of incalculable value to radio, telephone, motion pictures, and the U. S. Military service. They have enabled the deaf to hear and the dumb to speak. Many professional societies have awarded him medals and citations, and President Truman honored him for his scientific contributions to the national defense.

His wife, Mrs. Lorena Fletcher, was chosen American mother of the year in 1965. One of their five sons, Dr. James Fletcher, is president of University of Utah.

BYU Physicist to Receive Top Engineering Honor



Dr. Harvey Fletcher

Damage Suit Filed in Lift Mishap

PROVO (AP) — A third damage suit has been filed in Provo Fourth District Court in connection with a summer ski lift accident which killed two persons and injured several others.

Filed for Girl

The suit was filed on behalf of Valerie Dunford, 13, Provo, one of the persons injured in the mishap.

It asks \$75,000 in damages and names as defendants Timp Haven Corp.; Security Leasing Co.; Hjorth Brothers Construction and four private citizens.

Rex Dunford, the girl's father, filed the suit.

Lift Broke

The Dunford girl and a companion were injured when a ski lift at Timp Haven Ski Resort north of Provo apparently broke and tossed the youngsters to the ground, some 30 feet below.

A Provo woman and another girl were killed in the accident.

Special to The Tribune
PROVO — One of the top international engineering wards has been won by Dr. Harvey Fletcher, professor emeritus at Brigham Young University and one of the most decorated men in the field of physics.

The 1967 Founders Award of the Institute of Electrical and Electronic Engineers will be presented at the institute's annual meeting March 22 in the New York Hilton Hotel. It is the highest award of the international organization of 150,000 engineers.

Creative Contributions

Dr. Fletcher will be cited "for creative contributions to the science of physical acoustics, electrical engineering and for management skills in the operation of a leading research laboratory."

He is still active in research at BYU at the age of 82, the same school he won his bachelor of science degree from in 1907. He took his doctorate at Chicago University in 1911.

He has been called the "father of stereophonic sound" and was associated with Robert A. Milliken in the discovery of the atomic nature of electricity.

Director of Research

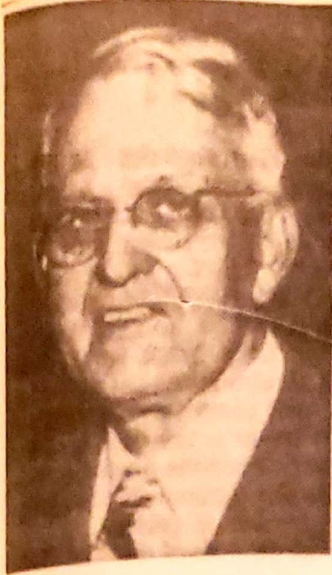
For some years, Dr. Fletcher was director of acoustics research at Columbia University and director of physical research at Bell Telephone Laboratories. In 1952 he came to BYU as the first dean of the College of Physical and Engineering Sciences and later as director of research.

He has won seven honorary doctorates, has patented numerous electronic inventions, been given numerous professional society medals and citations and Pres. Harry S. Truman honored him for scientific contributions to the national defense.

His wife, Lorena, was named American Mother of the Year in 1965. One of his five sons is Dr. James Fletcher, president of the University of Utah.

COTTONWOOD MALL

SHOP
THURSDAY
FRI.-MON.
NIGHT
TILL 9



DR. HARVEY FLETCHER

Fletcher Accorded High Award

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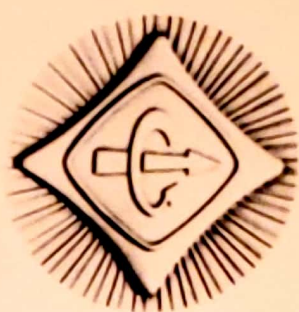
His wife, Mrs. Lorena Fletcher, was chosen American mother of the year in 1965. One of their five sons, Dr. James Fletcher, is president of University of Utah.

African tribes, early in the 11th century, used electric catfish to treat various ailments.

Dear Dr. Fletcher,
It warms our heart
when one whom we
admire and respect so
much receives
recognition & honor
Congratulations

Lucille
Fletcher

FOUNDERS AWARD



History of the Founders Award

The progress of a profession rests not only on the technical abilities of its members but on the qualities of leadership and dedication which they possess. It is therefore highly appropriate that among the major awards of the Institute of Electrical and Electronics Engineers there is one which brings deserved recognition to these all-important attributes.

The Founders Award was established by the Institute of Radio Engineers in 1952. It derives its character and purpose from the inspiring example of leadership and service set by the three founders of the Institute, Alfred N. Goldsmith, now Director Emeritus and Editor Emeritus of the IEEE, and the late Messrs. John V. L. Hogan and Robert Marriot. This purpose is perhaps best expressed by the citation that accompanied the first award, which read in part: "for outstanding contributions to the profession and to the Institute through wise and courageous leadership in the planning and administration of technical developments."

The recipient of that first award was David Sarnoff. In the thirteen years that followed only eight other men have been similarly honored: Alfred N. Goldsmith, R. A. Heising, W. R. G. Baker, Haraden Pratt, Ralph Bown, F. E. Terman, Andrew G. L. McNaughton, and Elmer W. Engstrom.

The IEEE will confer the Founders Award annually with the original concept of the award remaining unchanged. This year's recipient, Harvey Fletcher, continues to demonstrate that our profession owes much to the contributions, leadership, planning, and administration of our outstanding engineers.

Chairman, 1966 IEEE Founders Award Committee — John N. Dyer



HARVEY FLETCHER

1967 FOUNDERS AWARD RECIPIENT

"For his creative contributions to the science of physical acoustics, electrical engineering, and for his management skills in the operation of a leading research laboratory."

