

L.H. Latimer: Contributions to light



Lewis Howard Latimer's contributions to the electric power industry are being recognized during the centennial celebration of Thomas Edison's invention of the incandescent light bulb. Latimer was best known for patenting a process for making carbon filaments.

The celebration this year of the Centennial of Light, marking the 100th anniversary of Thomas Alva Edison's invention of the incandescent electric light bulb, brings to the forefront again the contributions to electric power of Lewis Howard Latimer, a Black inventor best known for patenting a process for making carbon filaments.

Latimer was one of the original Edison Pioneers, that select group of 28 of Edison's friends and fellow inventors. He came from humble beginnings and had little formal education, yet he became a respected inventor, draftsman, and engineer. Also, he was an author, poet and musician.

William H. Meadowcroft, historian for the Edison Pioneers and Edison's secretary, wrote upon Latimer's death in 1928 at the age of 80: "We hardly mourn his inevitable going so much as we rejoice in pleasant memory at having been associated with him in a great work for all peoples under a great man."

Latimer, the son of an escaped slave, was born on September 4, 1848, in Chelsea, Massachusetts. He read voraciously as a lad, wrote short stories, and taught himself how to draw. Later, as an office boy in a Boston patent office, he taught himself the principles of drafting and was rewarded by being made a draftsman for the company.

Soon he was chief draftsman, preparing drawings of inventions which were submitted to the U.S. Patent Office in Washington. One of his most famous submissions at that time in his career was drawings for Alexander Graham Bell's telephone.

It was not long before Latimer began drawing diagrams for his own inventions. In 1873, he received his first patent for an improved

washroom for railroad passenger cars, which won him recognition and a position with Hiram S. Maxim, the inventor of the machine gun, at the United States Electric Lighting Company, in Bridgeport, Connecticut. That was in 1878. During this time Maxim was claiming he invented the incandescent lamp, but eventually he lost in court.

While there, Latimer invented and patented an improved process for making carbon filaments in light bulbs. He also assisted in installing the lighting systems in New York, Philadelphia and Canada, and helped establish the first Maxim-Weston electric light bulb factory in London, England.

In 1884, he joined the Edison Electric Light Company, as a draftsman and engineer.

By this time, Latimer had become an expert electrical engineer. And, in 1890, he published the first technical electrical engineering book, "Incandescent Electric Lighting — A Practical Description of the Edison System."

Later, he transferred to the legal department of the Edison General Electric Company, where he served as an expert witness on Edison patents in various patent lawsuits brought by and against Edison. When Edison General merged with Houston Electric Company to create the General Electric Company, and the latter developed with Westinghouse a Board of Patent Control, Latimer was appointed a full-time consultant.

Latimer, like most of the Edison Pioneers, was hired because of a particular expertise. Edison recognized in each of the Pioneers not only a special talent, but an indefatigable ability to get things done and make things work. Lewis Howard Latimer fit that mold perfectly.

Conference explores utility rates, impact on poor

A conference scheduled for Saturday, April 21st in Portland will bring together poor people, seniors, environmentalists, union members, policy makers, energy activists, representatives of helping agencies and utility ratepayers to discuss the problem of rising utility rates and the particular impact of this problem on poor people.

Entitled "Utility Rate Relief: Option for Low Income People," the day-long conference poses the question "Can we have enough money at a price that even poor people can afford without losing jobs or environmental quality?" A morning panel discussion will focus on specific energy options such as lifeline and other rate restructuring, energy cou-

pons, direct assistance, conservation and renewable resources, and the formation of people's utility districts. Participants in the option panel will be Cary Schaye, of Fair Share; Lorrie Jones of Community Dynamics; Beulah Hand, former state legislator; John Bartels of the Eugene Water Board; Roy Hemingway of the Public Utility Commission; and Margie Harris of Western SUN.

An afternoon panel will present the view of different interest groups on energy questions, and the various values to be considered in weighing rate relief options. Participants in this panel will be Terry Fasthorse of Urban Indian Council; State Representative Rick Bauman; Marjorie

Parker of the Gray Panthers; Bob Baugh of International Woodworkers of America; and Janet Gillespie of the Eugene Future Power Committee. Throughout the day, conference participants will be involved in question and answer sessions and small group discussions.

Keynote speaker for the conference Paul Garver, will give a national overview of rate relief. Garver, a steering committee member of the Pennsylvania Alliance for Jobs and Energy, is also senior staff representative of Service Employees International Union Local 585. He is a lecturer in labor economics at the Community College of Allegheny County and former national chair of the Energy Commission of the New

American Movement.

The April 21st conference is sponsored by the Utility Action Center of Multnomah County Legal Aid and more than 25 community organizations. Following the formal conference, many of these groups will sponsor organizing meetings to educate participants about their work and enlist new members in their programs.

There is no charge for conference attendance, although a donation at the door will be appreciated. Child care will be provided at the conference site, the Sunnyside United Methodist Church, 3520 S.E. Yamhill in Portland. Further information is available by calling the Utility Action Center at 222-9311.

Geothermal energy: Power source for West

The Far West has far greater potential for the development of geothermal energy resources than the eastern parts of the U.S.

And the Northwest has some particularly promising places for geothermal prospecting, says an Oregon State University scientist who has been honored for his leadership in locating earth energy resources.

Gunnar Bodvarsson is the 1979 recipient of the citation given by the Oregon Academy of Science for significant scientific contributions. He is using some original mathematical and geophysical concepts in the search for energy from the innards of the earth.

"The geology of the West — from about Utah, Wyoming and New Mexico this way — is more varied and recent than is the case with the

older, more geologically stable eastern areas. Volcanoes were active over a large part of the Far West in relatively recent geologic times. Geysers and hot springs are evidence of the energy that might be tapped from the depths of the earth," Bodvarsson observed.

"Geyser area in northern California was put to use for the production of electricity some 25 years ago, for example. It has become a very large power resource."

Bodvarsson is a native of Iceland where geothermal hot springs are used to heat thousands of homes. For eighteen years, he was head of the department of earth heat for the National Energy Authority of Iceland.

"With its abundance of hot springs, Iceland is one of the world's

most favorable areas for geothermal development," he noted. "But the potential exists in many other places if the deposits can be located and tapped."

Dry steam is relatively inexpensive to convert for energy purposes, he added. "There are more difficulties in harnessing some hot water resources."

In one of three research projects he has underway, Bodvarsson is looking at the possibilities of drilling holes in selected spots and pumping cold water down for heating in the hot rock of the earth. Then the heated water would be pumped back to the surface and used for home and building heating, for agricultural greenhouses, etc.

"This is called forced geoheat recovery," Bodvarsson noted. The project is now in the "conceptual stage" where applied mathematics and engineering are involved along with geophysics (the science of the earth). Bodvarsson and OSU engineer Gordon Reistad hope to get to field trials and then drilling tests early in the 1980s.

The area where the corner boundaries of Oregon-Washington-Idaho touch is seen as one likely spot for the drilling of boreholes. Thousands of cracks in the earth's crust there were filled with thin vertical platelike intrusions of volcanic rocks (dikes). "Deep earth water may move up and around the dikes," Bodvarsson explained. Other possibilities for forced geoheat recovery drilling are the Klamath Basin, the Willamette Valley and along the coast.

In two other projects, funded by the U.S. Department of Energy and the National Science Foundation, Bodvarsson is working on complex scientific measurements as ways to

help locate geothermal energy resources in the earth.

Measurements of the "breathing" of the earth — in response to the strain of moon-sun tidal forces — are being planned as a way to help find geothermal deposits.

Bodvarsson also is looking at the possibilities of locating hot water or molten material deposits by listening for their sloshings with sophisticated instruments.

"Water in earth fractures and magma (molten rock) in magma pockets can oscillate or slosh, just as water in a deformable container such as a thin plastic jar or in a balloon. Rock walls have some elasticity too," he points out.

Bodvarsson has worked on the development of earth heat in nearly a dozen other nations.

"Geothermal heat from the earth will be used extensively in the future, when the need is sufficient to justify the costs involved and when exploring and engineering methods for recovering it are perfected," he says.

ENERGY DRAWING PARTICIPATING MERCHANTS

ABCO Power Equipment/1212 SE Powell Blvd./Portland, OR
Action Hg. & A/C/8718 SE Stark/Portland, OR
Aluminum Builders Serv. Inc./2221 NW Thurman/Portland, OR
Andrews Heating/2800 Southeast Division/Portland, OR
Bailey Tool & Ace Hardware/1918 SE 22nd Ave./Milwaukie, OR
Beaverton Fred Meyer/Home Improvement Center/4800 SW Western Ave./Beaverton, OR
Bell Heating/15550 Southeast Plaza/Clackamas, OR
Bryons Home Furnishings/819 SE Morrison/Portland, OR
Bud Monda's TV & Appl./Portland, OR
Builders City/8905 N. Vancouver Ave./Portland, OR
Burlitt Plumbing Inc./5700 NE Sandy Blvd./Portland, OR
Burlington Fred Meyer/Home Improvement Center/7555 SW Harbor Blvd./Portland, OR
Cedar Hills Coast To Coast/10130 SW Parkway/Portland, OR
Cedar Mill Lumber & Hardware/12700 NW Barnes Rd./Portland, OR
C & H Ace Hardware/806 NW Murray Rd./Portland, OR
Clackamas True Value Hardware/15606 SE 82nd Dr./Clackamas, OR
Clackamas TV Hardware/15605 SE 82nd Dr./Clackamas, OR
Coast To Coast Store/3632 SE 122nd/Portland, OR
Coast To Coast Hardware/6727 NE Killingsworth/Portland, OR
Coast To Coast/10130 SW Parkway/Portland, OR
Joseph L. Harrow, Jr./Coast To Coast Store/Lake Oswego, OR
Coast To Coast/12225 NE Olsen/Portland, OR
Coast To Coast/14155 SW Pacific Hwy./Tigard, OR
Coast To Coast/12225 NE Olsen/Portland, OR
Coast To Coast/7425 N. Leavitt/Portland, OR
A & H Heating & Air Cond./12085 SW 135th/Portland, OR
Copeland Lumber/10279 NE Sandy Blvd./Portland, OR
Copeland Lumber Yards/7730 SW 31st Ave./Portland, OR
Cornells Woodland Park Lbr. Co./4831 NE Fremont/Portland, OR
Danielson's Supercenter/1500 S. Mulalla Ave./Oregon City, OR
Division Fred Meyer/Home Improvement Center/12022 SE Division St./Portland, OR
Division Appl. Sales & Serv./4035 SE Division/Portland, OR
Division True Value Hardware/3630 SE Division/Portland, OR
Don DeWitt Appliances Ctr./17405 SE Stark/Portland, OR
Eastside Heating/7200 Southeast Johnson Cl. Blvd./Beaverton, OR
Edwards Building Supply/17005 NW Cornell Rd./Beaverton, OR
Falk Ace Hardware/4265 SW Cedar Hills Blvd./Beaverton, OR
Fred Meyer Co./3800 SE 22nd Ave./Portland, OR
Frey Meyer, Inc./3800 SE 22nd/Portland, OR
The Galleria/921 SW Morrison St./Portland, OR
MGR Gateway Fred Meyer/Home Improvement Center/18000 NE Halsey St./Portland, OR
General Furnace & A/C, Inc./15536 Southeast 82nd Dr./Clackamas, OR
Gentry Appliance Center Inc./200 NE 2nd/Gresham, OR
Glasco Fred Meyer/Home Improvement Center/6615 NE Glisan St./Portland, OR
Gresham Cooperative/325 NE 242nd Hogan Rd./Gresham, OR
Gresham Fred Meyer/Home Improvement Center/2497 E. Burnside Rd./Gresham, OR
Handyman/15550 SE McLoughlin Blvd./Milwaukie, OR
Handyman/4955 SW Western Blvd./Beaverton, OR
Handyman/730 SE 122 Ave./Portland, OR
Home Improvement Center/3805 SE Hawthorne Blvd./Portland, OR
Clark Lumber Co./8460 N. York Rd./Box 635/Tualatin, OR
Hillside Hardware/6350 SW Capital Highway/Portland, OR
Hollywood Fred Meyer/Home Improvement Center/4101 NE Sandy Blvd./Portland, OR
Homestead True Value Hardware/P.O. Box 472/Gresham, OR
Fred Meyer Home Imprvmt. Ctr./7404 N. Interstate/Portland, OR
Jacobs Heating & A/C/1238 Southeast Gideon/Portland, OR
J.C. Penney/9500 SW Washington St./Hwy. 217 & Shulls Ferry Rd./Portland, OR
Jim Subils' Home Furn./9055 SW Harbor/Portland, OR
John Day Hardware Co./161 Main St./John Day, OR
Fred Meyer/3800 SE 22nd/Portland, OR
King Road Fred Meyer/10510 SE 82nd Ave./Portland, OR
Lake Grove Truss/16130 NW Ferry Rd./Lake Grove, OR
Larry Kelley Inc./19140 SE Stark/Portland, OR
Ancut Sheet Metal Co./4312 North Williams/Portland, OR
Levin Hardware Co./1331 NE Union Ave./Portland, OR
Major Appliances Sales/4528 SE Woodstock/Portland, OR
McCall Oil Co./1650 Lombard/Lombard, OR
McCoy Electronics/4516 NE 42nd/Portland, OR
Teletronics Home Furn./7522 N. Lombard/Portland, OR
McNair True Value Hardware/1935 Oregon St./Portland, OR
The Miller Lumber Co./P.O. Box 676/Madras, OR
Milwaukie True Value Hardware/10405 SE 82nd Ave./Portland, OR
Modern Plumbing Co./29045 SW Burnham/Tigard, OR
Montgomery Wards/Jantzen Beach S/C/1400 N. Hayden Island Dr./Portland, OR
Montgomery Wards/4401 SW 110 Ave./Beaverton, OR
Montgomery Wards/9800 SE Washington St./Mall 205/Portland, OR
Moreland Ace Hardware/6305 SE Milwaukie Ave./Portland, OR
Morrison Fred Meyer/Home Improvement Center/130 SW Morrison St./Portland, OR
Moscoe Bros. Inc./6927 SE Foster Rd./Portland, OR
Mt. Hood Building Supply/8301 SE Division St./Portland, OR
Royal Furniture Appl./8237 SE 17th/Portland, OR
Northwest Natural Gas Co./123 NW Flander St./Portland, OR
Parr Lumber Co./1320 NW 8th/Portland, OR
Parr Lumber Co./6250 NE Union Ave./Portland, OR
Parr Lumber Co./18065 SW Barnes Rd./Portland, OR
Parr Lumber Co./1090 McVey Ave./Lake Oswego, OR
Parr Lumber Co./2351 SW Oakland Rd./West Linn, OR
Parr Lumber Co./3260 SE Oak Grove Blvd./Milwaukie, OR
Parr Lumber Co./18465 SE Stark St./Portland, OR
Peninsula Fred Meyer/6850 N. Lombard/Portland, OR
Phil Blank's/6800 Beav. Hwy. SE/Portland, OR
Power Plant Hg. & Eng./5136 Southwest Corbett/Portland, OR
Raleigh Hills Fred Meyer/Home Improvement Center/7700 SW Heaverton/Hillsdale H/Portland, OR
Robben Oil/2300 Southeast 7th/Portland, OR
Rockwood Fred Meyer/Home Improvement Center/18535 SE Stark St./Portland, OR
Rose City Fred Meyer/Home Improvement Center/6939 NE Sandy Blvd./Portland, OR
Rose Heating/9945 Northeast 6th Dr./Portland, OR
Jim Subils/9055 SW Harbor Blvd./Portland, OR
St. Johns Hardware/8021 N. Lombard/Portland, OR
Sandberg's Hardware/2932 N. Lombard/Portland, OR
Sears Roebuck & Co./524 NE Grand Ave./Portland, OR
Sears Roebuck & Co./9800 SW Washington Sq. Rd./Portland, OR
Major Appliances/4528 SE Woodstock/Portland, OR
Smith's Home Furnishings/3016 SE Division St./Portland, OR
Southeast Fred Meyer/Home Improvement Center/3253 SE 82nd Ave./Portland, OR
Stadium Fred Meyer/Home Improvement Center/100 NW 20th Place/Portland, OR
Standard Appliance/4804 SE Woodstock/Portland, OR
Stark Fred Meyer/Home Improvement Center/700 NE 122nd Ave./Portland, OR
McNaughtons TV/11103 SE Main St./Milwaukie, OR
Stransky Lumber Co./6001 SE Johnson Creek Blvd./Portland, OR
Sunset Fuel/2944 Southeast Powell Blvd./Portland, OR
Tele Tronics/7500 N. Lombard/Portland, OR
Temp Rite Inc./3914 NE Union Ave./Portland, OR
Thermo Industries Inc./5067 Intl. Way Ste. E./Omar Industrial Park/Milwaukie, OR
Tom Peterson's Inc./8303 Insley SE/Portland, OR
Tualatin Valley Ace Hardware/15700 SW Burnes Ferry Rd./Lake Oswego, OR
Tualatin Valley Builders Sply./15700 SW Burnes Ferry Rd./Lake Oswego, OR
Uptown Hardware Inc./27 NW 23rd Pl./Portland, OR
Capital Oil Company/7637 SW 33rd Ave./Portland, OR
Res L. Walker Plumbing Co./2938 NE Alberta/Portland, OR
Walnut Park Fred Meyer/5008 NE Union Ave./Portland, OR
Washeo True Value Hldg. Supply/12675 SW Beaverton Rd./Beaverton, OR
Mr. Wells/3800 SE 22nd Ave./Portland, OR
Willamette Ind. Home Ctr./12585 SW Pacific Hwy./Tigard, OR
Woodland Park Hardware/10414 NE Halsey St./Portland, OR

WOMEN! CHOOSE FROM HUNDREDS OF NEW OCCUPATIONS!

This is big news. Hundreds of Army skills are open for women. Only a few specialties remain available to "men only." Move fast while the opportunities last. Call your local Army representative now. Join the Army and be the future.

234-7209

Interested in current books about African Liberation?

Visit:

JOHN REED BOOK STORE
In the Dekum Building
519 S.W. 3rd Avenue
Sixth Floor

Or Call:

227-2902