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(Portrait or informal photographs of Professor Thomson will be supplied on request)

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ELIHU THOMSON, ELECTRICAL PIONEER

No other scientist in the world has received such unique distinction as Professor Elihu Thomson, in being awarded the three most notable medals of Great Britain. In 1916 Professor Thomson was the recipient of the Hughes medal, bestowed by the Royal Society; in 1924 he was honored by the award of the Kelvin medal, given by all the technical and engineering bodies of England with the concurrence of the leading engineering societies of America; and in 1927 he was presented by the Institution of Electrical Engineers of England with the Faraday medal, commemorating the founding of the Institution.

In addition, Professor Thomson in 1910 was the first recipient of the Edison medal, given by the American Institute of Electrical Engineers; and in 1916 he received the John Fritz medal, bestowed jointly by the American Institute of Electrical Engineers, the American Society of Mechanical Engineers, the American Society of Civil Engineers, and the American Institute of Mining and Metallurgical Engineers. A total of fifteen medals have been bestowed upon Professor Thomson in this country and abroad.

All the growth of electric things in America has happened in the life-time of Professor Elihu Thomson, electrical scientist of Lynn, Mass., whose friends are planning a public dinner on March 29, his eightieth birthday. The entire development of the electrical industry, of which he is one of the great pioneers, and the whole history of the General Electric Company, of which he is one of the founders, have come to pass since Professor Thomson was 25 years old.

Speakers at the forthcoming birthday party, to be held at the Massachusetts Institute of Technology, Cambridge, Mass., will show how Elihu Thomson, Thomas A. Edison, Charles F. Brush, and James J. Wood were the original "big four" of electricity

in America. All four of them, between 1878 and 1882, a period of four years, successfully started electric-light systems. Three of them gave the public arc lights and the fourth, Edison, devised the incandescent lamp for lighting homes, offices and stores.

All but Thomson have died---Wood in 1928, Brush in 1929, and Edison in 1931. Thomson, who has many hobbies, has outlived the other three. He is the "last of the first".

Honoring Elihu Thomson means honoring a star of American science. He has won medals and college degrees repeatedly in this country. So brightly have his life and work shone forth that their lustre has reached across the sea. In England, land of the great Faraday and the mighty Kelvin, Elihu Thomson has been awarded the big medals of science---the Hughes, Kelvin and Faraday medals. No other man has ever won all three. And the Royal Institution of Great Britain has elected him an honorary member, the highest honor that Englishmen can give to a foreigner.

Thomson has been an electrical pioneer both in practical and theoretical things. He had one of the best of the early arc-light systems. He invented the first "three-phase" electric dynamo, a type of design now in every-day use. He was the first man to use transformers on electric circuits in the modern manner. He discovered the secret of electric resistance welding. He had the first practical electric meter for measuring watts. He was ahead of all others with his lightning arrester and his alternating-current motor. He

demonstrated wireless waves twelve years before anyone else.

His boyhood in Philadelphia was amazing. He was ready for high school at eleven, but had to wait two years before he could enter. His playtime was spent in mechanical and electrical experiments. He could turn tops on a foot lathe so skillfully that he had a busy time supplying his tops to the boys on his street.

But while other lads were shooting marbles or running bases, Elihu Thomson was building a home-made frictional electric machine, by means of which he gave his father an electrical shock that knocked that gentleman off his feet. Watching an iron foundry near his home he built a little cupola furnace and in it melted some iron, although he could not get it into a mold before it chilled.

He learned how to grind a microscope lens, and before he was twenty he ground, at his home workbench, a complete microscope, an instrument containing ten lenses, the largest not as big as a nickel and the smallest about the size of a pin-head. In this same home workshop, when he was only nineteen, he began building a pipe organ of twenty-five stops, completing it in two years.

After making the acquaintance of a Philadelphia photographer he was continually making photographs. In later years he became interested in color photography ---auto-chrome pictures. He has today a whole cabinet filled with auto-chrome pictures of New England autumn foliage.

At the age of twenty Thomson was an assistant professor in the Boys' Central High School of Philadelphia, a high school

with almost a college rating. He was only twenty-three when he was appointed full professor of chemistry and mechanics. In this same period he gave a series of six popular lectures to crowded audiences at the Franklin Institute on the nature of electricity, making original experiments on the platform.

Interested in astronomy from his earliest manhood, Thomson has always had his own observatory and small telescope, the lenses of which he has ground himself. Nearly thirty-five years ago he first suggested the use of fused quartz for the mirrors of reflecting telescopes. Today fused quartz is being seriously considered for the mirrors of the great 200-inch telescope to be built for the California Institute of Technology.

This will be the largest telescope ever built. Unless a practical and economical plan for making the huge seventeen-foot mirror out of glass can be found, the mirror will be constructed out of fused quartz in the Thomson research laboratory of the General Electric Company under the patents and the supervision of eighty-year-old Elihu Thomson.

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