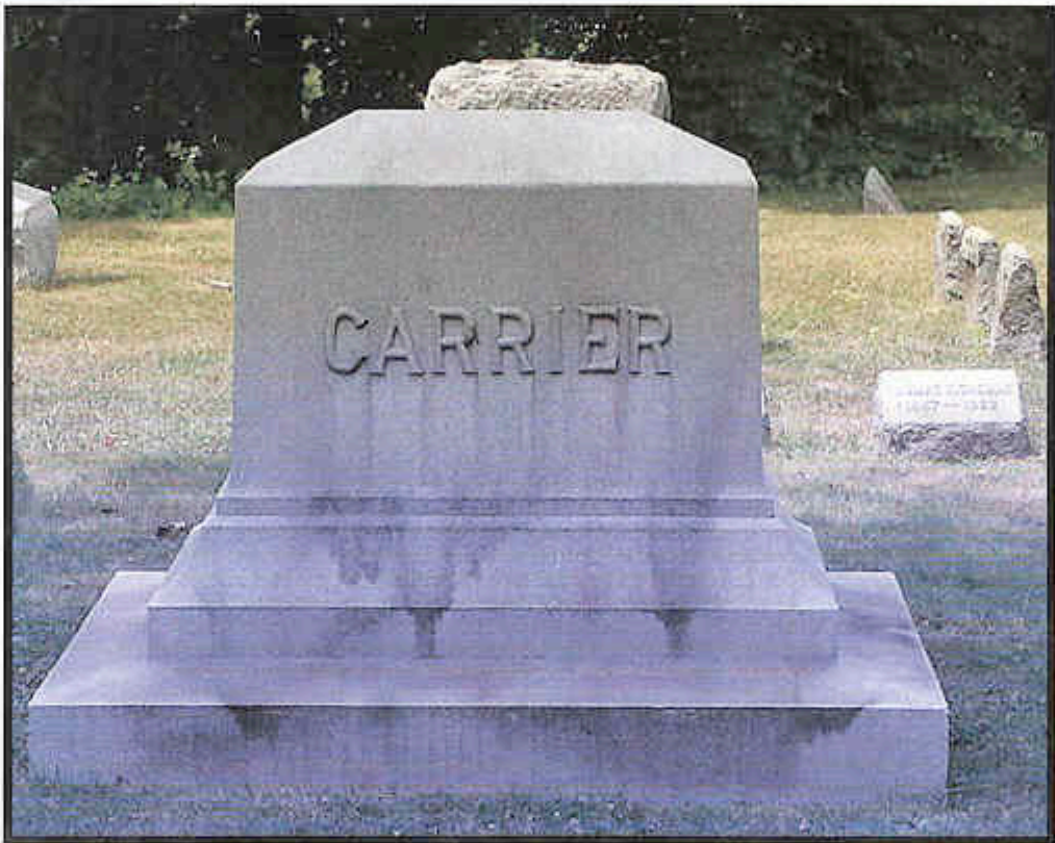


Willis Haviland Carrier
Father of Air Conditioning

VOLUME-2
Carrier in the Heritage Group Collection



2.10 Willis Haviland Carrier: Obituary

Dr. Willis H. Carrier

1876-1950



The "Chief", as Dr. Willis H. Carrier was affectionately known to his associates and friends, was called to his eternal reward on October 7, 1950. Dr. Carrier died in Cornell Medical Center of New York Hospital after having spent two weeks there as a patient for a check of a heart ailment. He was chairman-emeritus of Carrier Corp., Syracuse, N. Y., at the time of his death.

He was born on November 26, 1876 in Angola, N. Y., and attended Cornell University, graduating with an M.E. degree in 1901. He received his D.E. from Lehigh University in 1935 and his D.Sc. from Alfred University in 1942.

Dr. Carrier formed the Carrier Engineering Corp., at Newark, N. J., with J. Irvine Lyle and others in 1915, becoming its president. The firm later became the Carrier Corp. He served as president until 1931, when he became chairman of the board.

Dr. Carrier's interest in air conditioning had its origin in the problems of a Brooklyn color processor in 1902, when he was employed as an engineer by the Buffalo Forge Co. As a result of his inquiries into this problem, Dr. Carrier developed in 1903 what was known as a spray-type air washer, and in the course of this work became interested in the general problem of humidification and dehumidification. In 1905 he devised a spray-type air conditioner capable of heating, cooling, humidifying air, the basis for those which are on the market today.

It was as a result of this development that he left the Buffalo Forge Co. where he had become chief engineer in 1906, to pursue the studies that led him to the organization of the Carrier Engineering Corp. in 1915. In 1907 he had patented what was known as *dewpoint control*, a method of regulating humidity by controlling the temperature of the spray-washer in a washer or conditioner of air.

His researches led Dr. Carrier to an exhaustive study of the psychrometric phenomena, including the numerous factors related to the dehumidification of air by the use of mechanical refrigeration. He completed this study in 1911 and presented to the *American Society of Mechanical Engineers* a paper, *Rational Psychrometric Formulae*, which was ranked as fundamental engineering doctrine and upon which was built the science of air conditioning. Thus, Dr. Carrier had earned for himself the title of *father of air conditioning*.

Further studies brought about in 1914 the publication of *Fan Engineering*, which he edited, containing many tables and much data of basic importance. In

1912 he had produced a self-contained air conditioning unit, a combination of motor-driven fan and pump to send air through a spray of controlled temperature, which was probably the first such unit designed for railroad use.

In the ensuing years, Dr. Carrier made numerous contributions to air conditioning. These included the ejector system, first developed in 1916 for the tobacco, food, textile and other industries, and many of the principles used in conditioning the air in theaters and other large public gathering places.

Honorary membership was conferred upon Dr. Carrier in 1944. He was very active in the Society serving as its president, first vice president and second vice president, in 1931, 1930 and 1929, respectively. He was a Presidential member and served on the Advisory Council from 1932-1950. Active in New York Chapter affairs, he served as the Chapter's president and vice president in 1921-22 and 1920-21, respectively. He served on many important committees of the Society among which were:

1917-19	To Cooperate with U.S. Navy Dept.	1927-29	Guide Publication
1919	To Confer with Weather Bureau	1928	TAC on Garage Ventilation
1921-22	Synthetic Air Chart (chairman)	1928	Meetings Program
1921-23	Sub-Committee on Ventilation	1929-30	Executive
1923	Membership (chairman)	1932	Executive
1923	Sub-Committee on Subjects	1932	TAC on Re-Study of Comfort Chart and Comfort Line
1923-25	Executive	1933	Nomenclature
1923-28	Sub-Committee on Air Washers and Humidifiers	1934	Ventilation Standards
1924-25	Membership (chairman in 1925)	1937	TAC on Treatment of Air with Electricity
1925	Standards of Ventilation (chairman)	1938	TAC on Air Cleaning and Atmospheric Impurities (Mechanical Procedures)
1925	To Develop a Ventilation Safety Code under the Procedure of The American Engineering Standards Committee	1938	Engineering in Its Relation to Public Health
1926-27	Publication	1938	Educational Publicity
1927-28	Committee on Research	1939-44	TAC on Psychrometry
1927-28	TAC to Cooperate with Rochester School Board (vice chairman)	1942	F. Paul Anderson Award
1927-29	TAC on Temperature, Humidity and Air Motion (chairman)	1945	F. Paul Anderson Award
1927-29	TAC on Standards of Ventilation (chairman)	1946	War Service
		1946	Nominating Committee
		1947	History Committee

Dr. Carrier was a member of the *A.S.M.E.*, *A.S.R.E.* (president in 1927), *A.A.A.S.* (elected Fellow in 1930), Sigma Xi and Tau Beta Pi (Cornell University), *Cornell Society of Engineers* (president in 1939), Technology Club, Engineers Club, Cornell Club, Onondaga Golf & Country Club, and the Century Club.

Dr. Carrier received the following awards: John Scott Medal in January 1932, which was awarded by the City of Philadelphia; the F. Paul Anderson Medal in March 1932, awarded in recognition of outstanding contributions in heating, ventilating and air conditioning by the A.S.H.V.E.; the *A.S.M.E.* Medal in 1934; and Franklin Institute's award—the first Frank P. Brown Medal in 1941.

Dr. Carrier served as the United States' representative at the World Engineering Congress in Japan in 1929, and in 1940 was selected as a *modern pioneer of American invention* by the *National Association of Manufacturers*. In 1947 he was one of three Americans invited to address the centenary celebration of *Britain's Institution of Mechanical Engineers*.

Funeral services for Dr. Carrier were held at 11:00 a.m., Tuesday, October 10, at the Park Central Presbyterian Church, Syracuse, N. Y.

Dr. Carrier is survived by his wife, the former Elizabeth Marsh Wise, of 2570 Valley Drive, Nedrow, New York, and two sons, Earl G. (former member of Council) and Vernon G. Carrier.

A POEM by Dr ALBERT KLEIN
IN TRIBUTE TO WILLIS HAVILAND
CARRIER

Bad Teinach, Germany
14 February 1947

Seventy years have passed away
Since a cold November day,
Came to life a black-haired boy,
Loud and lusty was his cry.

Willis Haviland he was named,
He became well-known and famed,
As the man who made, I say:
"Every day a perfect day."

But before he could do that-
In young years he grew not fat,
For he had no easy start,
Had to work long hours and hard.

School and college he passed, swift,
Nobody gave him a lift,
But his indomitable will
Drove him upwards the steep hill.

So he made his later way,
Worked and studied night and day,
Till he drew his famous chart
That gave air conditioning its start.

Out of his inventive mind
Fans and washers he designed
Autoregulation too
From imagination grew.

Centrifugal compressors came
Through his work to widest fame,
He made, I state, short and tart:
Air conditioning an art.

He wrote books about the air
And its technique and with rare
Knowledge, intuition told
Of its problems manifold.

How to cool it, how to heat,
Whether fast or slow the speed,
Where the pressure high, where low,
Whether strong or soft the blow.

Whether air was much too dry
Or humidity too high-
"Health and comfort through good air"
Was his watchword everywhere.

All the places where man slaves,
Suffers from cold and heat waves,
Cold air, hot air, dusty, mean
He made warm or cool and clean.

But not only he improved
Air where workers sat or moved,
Theatres, movies with great care
He gave well conditioned air.

Thus, not only USA-
Europe, Asia, Africa
Soon called Willis Carri(e)r:
"Air conditioning's pioneer."

He brought help to all mankind,
Lessening the daily grind;
May he long live, healthy, strong
Many, many years to come.

[1/487a]

INVENTOR OF AIR CONDITIONING IS HONORED



Shown are Joseph Davis, President of Niagara Frontier Chapter (left) with Alfred E. Stacey, Jr., one of the original founders of the Carrier Corp

"Birthplace of Willis Haviland Carrier, 1876-1950, teacher-engineer, man of science, father of air conditioning; Town of Evans Historical Society, Buffalo & Erie County Historical Society, 1968." These words are in-

scribed on the blue metal marker which was unveiled Saturday morning, June 22, at the Veterans of Foreign Wars, Post 8989, Eric Rd., Town of Evans, Angola, N.Y.

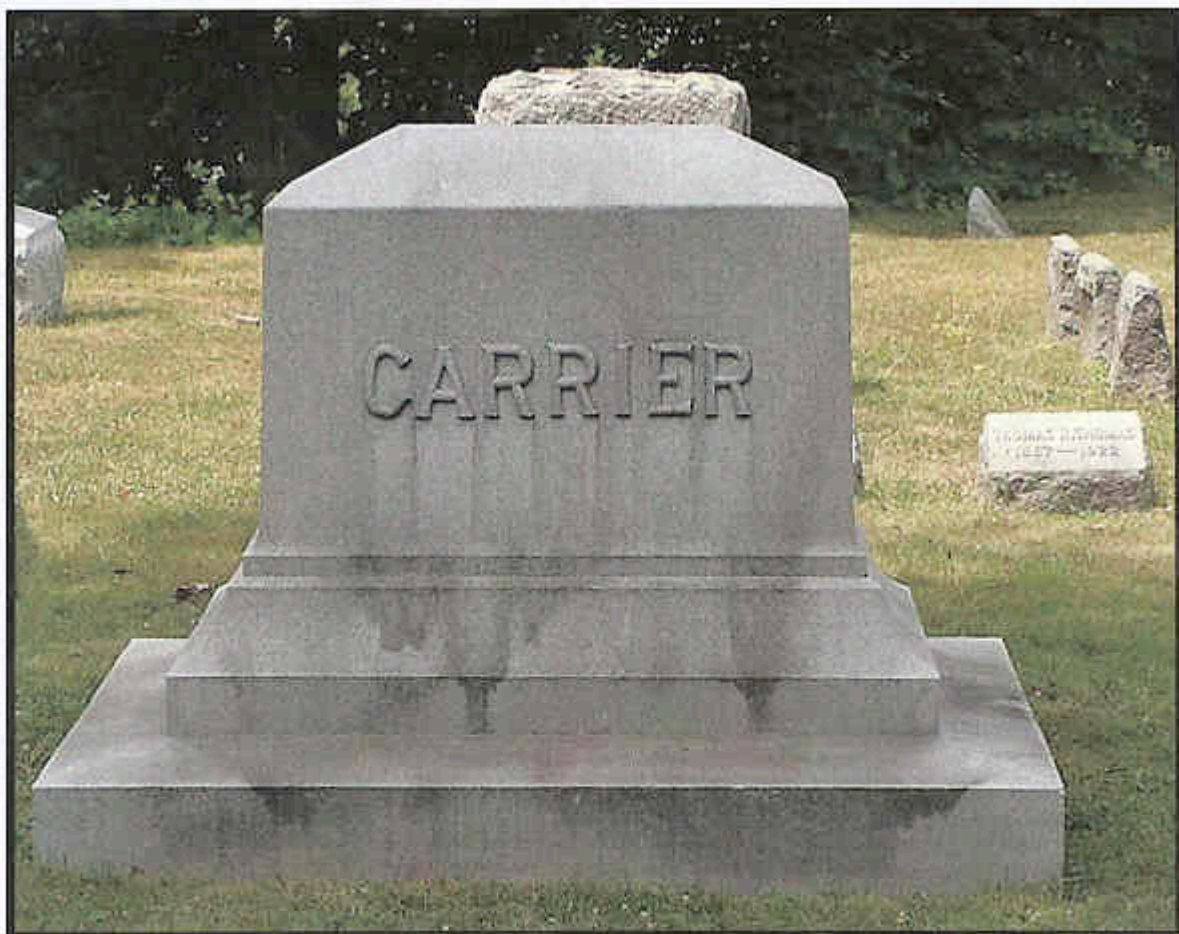
The famous engineer and inventor of air conditioning was honored for his contributions in installing air conditioning in many large hotels, theaters, and government buildings, including the Pentagon, House of Representatives and the Senate. Evans' Historical Society and the Buffalo & Erie County Historical Society dedicated the marker, which is 12 by 18 in. wide and stands on a 6-ft pole in front of the VFW post.

Mr. Carrier was an ASHRAE Presidential Member and the first recipient of the Society's F. Paul Anderson award, 1932.

Among the noted guests were: Vernon G. Carrier of Summit, N. J., Mr. Carrier's son; ASHRAE Presidential Member Carlyle Ashley of Manlius, N. Y., a nephew and consulting engineer with the Carrier organization; ASHRAE Presidential Member Alfred E. Stacey, Jr., the only living member of the original seven engineers who formed the Carrier Corp; and ASHRAE Member Joseph Davis, president of Joseph Davis Inc, Past President of the Niagara Frontier Chapter of ASHRAE (1931-32) and president, for the last 19 years, of the Niagara Frontier State Park Commission.

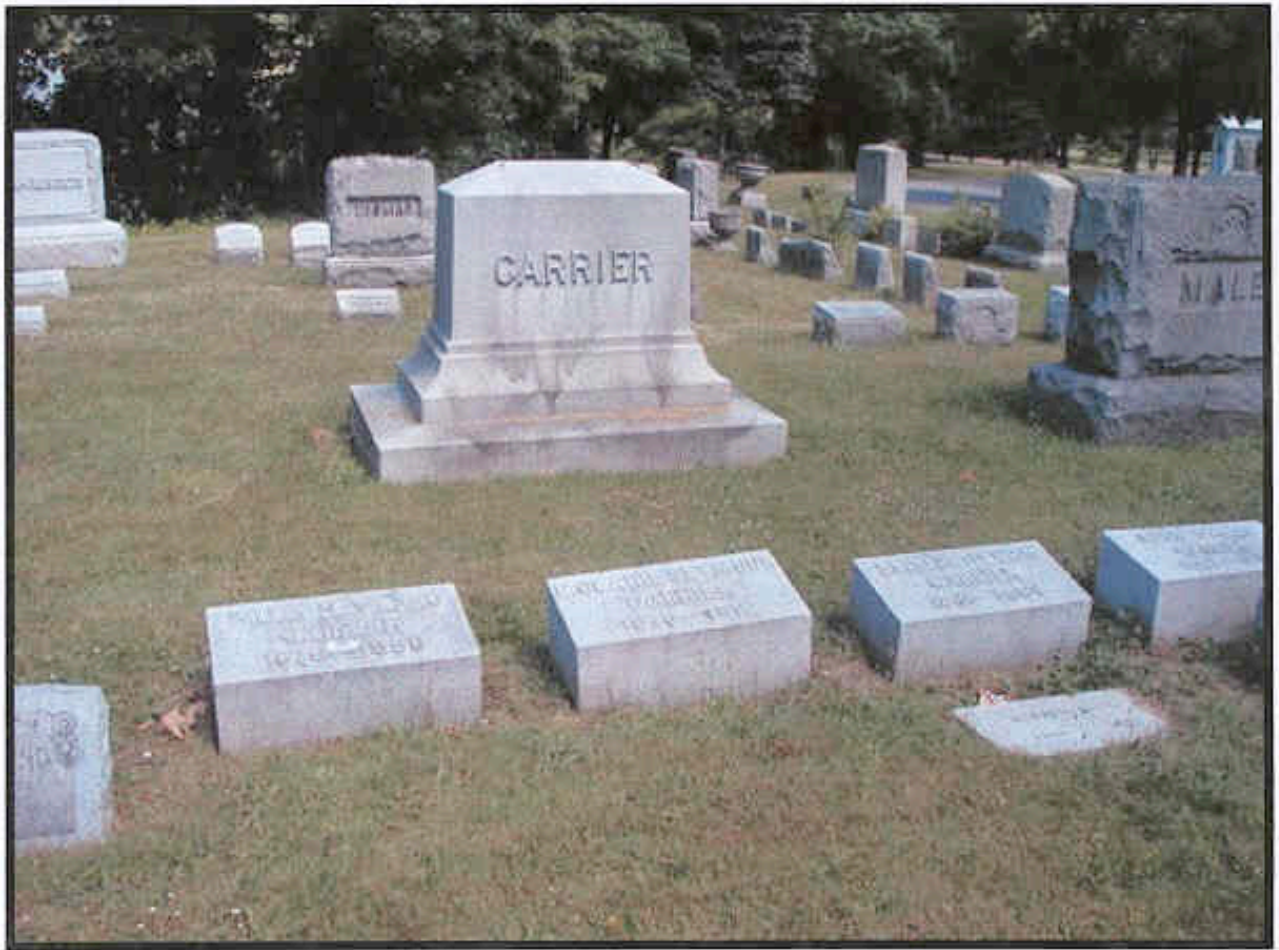
The unveiling of the marker was a public ceremony and all interested persons were invited to attend.

Obituary 4: Willis Haviland Carrier 1876-1950 [ASHRAE Journal, August 1968]

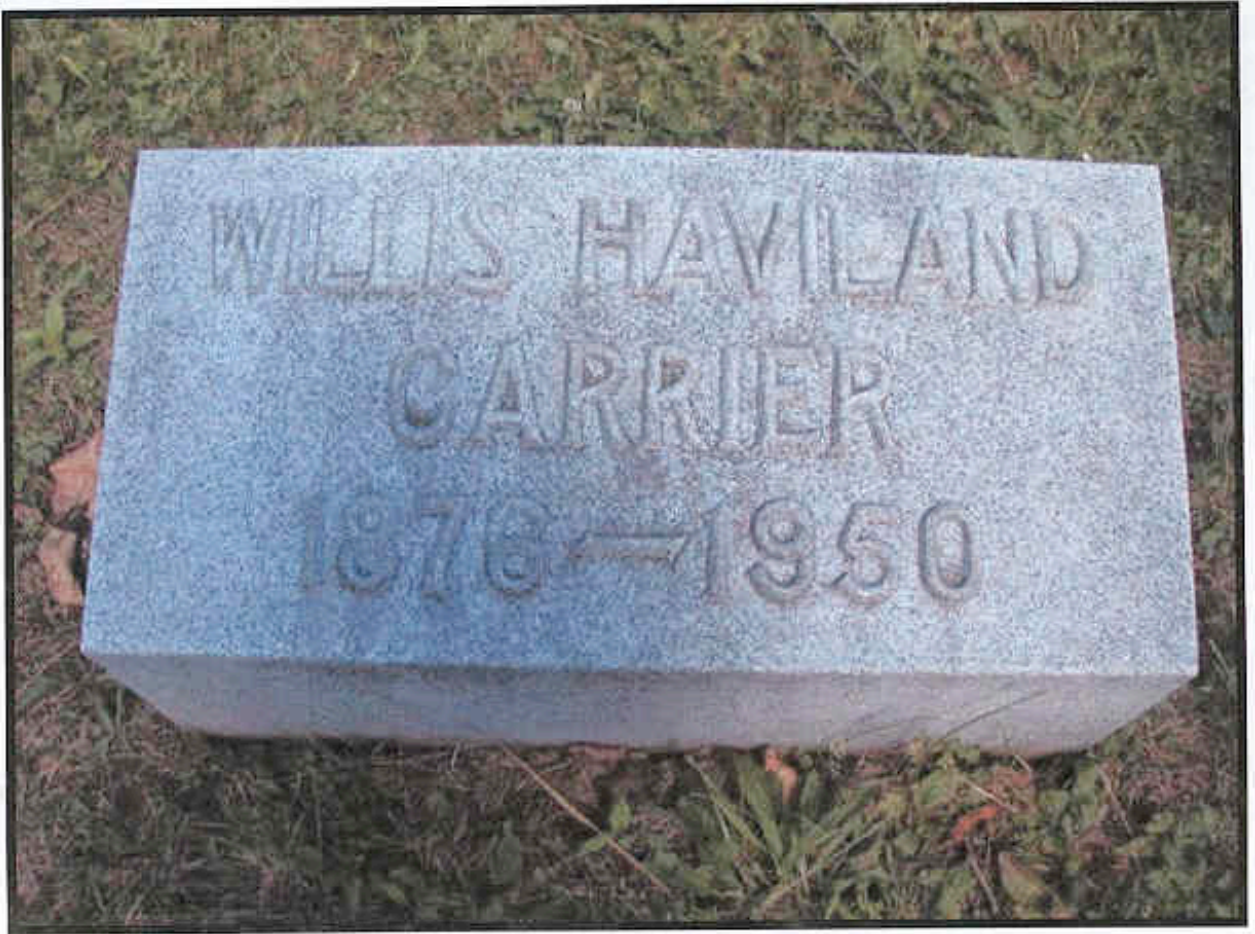


Obituary 5

*Carrier Family Memorial, Forest Lawn Cemetery, Buffalo, New York State
[thecemeteryproject.com]*



*Obituary 6
Carrier Family Memorial and Grave Markers,
Forest Lawn Cemetery, Buffalo, New York State
[thecemeteryproject.com]*



Obituary 7

*Grave Marker for Willis Haviland Carrier, 1876-1950,
Forest Lawn Cemetery, Buffalo, New York State
[thecemeteryproject.com]*