

Willis Haviland Carrier
Father of Air Conditioning

VOLUME-2
Carrier in the Heritage Group Collection



2.1 Cornell University - Alumni Records

FILL OUT IN PENCIL TO REGISTRAR OF CORNELL UNIVERSITY ITHACA, N. Y.

CORNELL UNIVERSITY, CLASS OF '01

NAME *Willis H. Carrier* YEAR *M. E.*
 ADDRESS *150 Amherst St Buffalo N. Y.*
Buffalo Forge Co. Buffalo N. Y.

MEMBER OF CORNELL ALUMNI ASSOCIATION OF

NAME AND ADDRESS OF SOME RELATIVE OR FRIEND WHO WILL PARTIALLY KNOW YOUR ADDRESS

YEAR	EDUCATION	NAME OF COMPANY	ITEMS OF SPECIAL INTEREST SINCE GRADUATION—NOTE PARTICULARLY, BIRTH, SOCIAL OR BUSINESS MEMBERS, CLUBS, SOCIETIES, BOOKS PUBLISHED
1901	Chief of Engineering to Department	Buffalo Forge Co	Associate Member (elected 1905) of American Society of Mechanical Engineers. Junior partner of the Carrier Air Conditioning Co. of America Office 39 Cortlandt St. New York City. Director of the systems of Air Heating, Humidifying and Dehumidifying sold by this company. Some of publications mailed under separate cover.

VITAL STATISTICS

BIRTHPLACE *Angola* MOTHER'S BIRTHPLACE *Ohio* FATHER'S BIRTHPLACE *New York or New Jersey*

PARENTS NAMED IN FULL (GIVEN NAME OF MOTHER), WHEN AND WHERE BORN, AND TERMS OF INTEREST REGARDING THEM

FATHER *Lucas Watkins Carrier*
 MOTHER *Elizabeth Haviland*

EDUCATION *Buff*

EDUCATIONAL INTEREST

BIRTHDATE *Aug 27 1882* PLACE OF BIRTH *Buffalo* NAME *Willis H. Carrier*

UNIVERSITY STATISTICS

PREPARATORY SCHOOL, NAME, LOCATION, ETC. *Central High School Buffalo N. Y.*

COTHELL DATE OF ENTRANCE *Sept. 1897* DATE OF DEPARTURE *June 1901* COURSE *Mech. Eng.* HONORS *M. E.*

FRATERNITY AND GRASS SOCIETIES

ATHLETICS

CLUBS

HONORS

MISCELLANEOUS

OTHER DEGREES AND COURSES, WHEN AND WHERE TAKEN

23
00495

**Cornell University 1: Record Card Willis H Carrier, Class of 1901
[Cornell Alumni Records]**

CANDIDATES FOR ALUMNI TRUSTEES

1897 with a State Scholarship, winning also a University Scholarship. At the end of his Junior year, he and W. E. Chase bought a laundry concession on the Campus and combined the services of two laundries, beginning the Student Laundry Agencies.

Carrier received the M.E. in 1901 and joined the Buffalo Forge Co. as a research engineer, becoming chief engineer in 1906. He founded Carrier Engineering Corp. in 1915, and his many inventions have been the basis of the modern air conditioning industry. He was awarded the John Scott Medal for his inventions of processes and apparatus for air conditioning and refrigeration, the F. Paul Anderson Gold Medal for distinguished scientific achievements in the same field, the 1934 Medal of the ASME, and the Brown Medal of the Franklin Institute in 1944. He received the honorary Doctor of Engineering at Lehigh University in 1935 and the D.Sc. at Alfred in 1942. He has written extensively for professional engineering journals, and several papers on technical education; is a past-president of the American Society of Heating and Ventilating Engineers and the American Society of Refrigerating Engineers and represented these two organizations at the World Engineering Congress in Japan in 1929-30, was elected an honorary member of the ASME in 1940.

Carrier was president of the Cornell Society of Engineers in 1940 and vice-president of the Cornell Alumni Fund Council from 1938-41. He is a member of Sigma Xi, Tau Beta Pi, and Phi Kappa Phi, and of the Cornell Clubs of Syracuse and New York. The late Mrs. Carrier was Jennie T. Martin '90.

00480

28

Willis H. Carrier '01

Willis H. Carrier '01 is chairman of the board of The Carrier Corp., Syracuse, and founded and was president of the Carrier Engineering Corp. which preceded it. He has been an Alumni Trustee since 1940; is a member of the Board's audit committee.

He was born November 26, 1876, in Angola and entered Sibley College from Buffalo Central High School in



Cornell University 2
[Cornell Alumni Records]

CORNELL ENGINEERS

WILLIS H. CARRIER, '03 M.E.

THAN A.S.M.E. Gold Medal for 1934 was awarded to Willis H. Carrier, in recognition of his research and development work in air conditioning, a field in which he has been the pioneer since the very beginning.

As a boy on a farm near Angola, N. Y., Mr. Carrier formed the intention of becoming a mechanical engineer because of an intense interest in machinery and in mathematics and physics. He attended the Angola Academy and after graduating he took a teachers' training course and taught in an adjoining school district for a year and a half.

In 1896, he went to Buffalo, where he attended the Buffalo Central High School, and completed the subjects required for entrance to Cornell, which were not offered at the Angola Academy. He won a state scholarship, and after coming to Ithaca, he won a University scholarship. He won his numerals in crew, but his rowing was cut short in his junior year by an attack of typhoid fever, which kept him out of school for a few months. However, he made up the time he had lost, and so was able to graduate with his class.

Upon returning to school, he bought out a successful laundry business, and in his senior year, he took in a partner and formed the Student Laundry Agency, which is still in existence today. This solved the financial question, which had been a great problem for him in the preceding years.

Immediately after graduation, he started working for the Buffalo Forge Company, Buffalo, N. Y. While he was with the Buffalo Forge Company, he instituted a research department, and revolutionized their methods of engineering and became Chief Engineer of the company in 1905. He held this position until 1915, when, together with Mr. J. I. Lyle, he organized the Carrier Engineering Corporation, which undertook for the first time to conduct air conditioning as a business. Starting with \$25,000 capital, contributed by himself and his associates, he built up the capital structure out of surplus earnings to \$1,600,000 in 1927. In 1930, a merger was made with the Brunswick-Kroeschell Company, a refrigerating machinery company, and the York Heating and Ventilating Company, the leading manufacturers of unit heaters. This consolidation became the Carrier Corporation, with Mr. Carrier as chairman of the board.

It was soon after he became connected with the Buffalo Forge Company that Mr. Carrier became interested in air conditioning. When the company encountered the problem of providing clean air, he developed the spray-type air washer. Later when the field of air conditioning began to appeal to him, he improved this and produced the spray-type air conditioner, upon which the whole science of modern air conditioning is based. He then developed and patented dew-point control—a means

of regulating humidity by controlling the temperature of the spray water. More recently, he has invented the system of centrifugal refrigeration, which fulfills the need of a satisfactory refrigerating system and a harmless refrigerant for air conditioning. Although these three are his most important inventions, he has made numerous others relating to heating, ventilating, air conditioning and refrigeration.

Besides the A.S.M.E. Gold Medal which Mr. Carrier has just received, he has also been the recipient of several other honors. He was awarded the John Scott award in 1931 by the Directors of City Trusts, Philadelphia for "Invention of processes and apparatus for air conditioning and for refrigeration. He was awarded the F. Paul Anderson Gold Medal in 1932 by the American Society of

Heating and Ventilating Engineers. He was a delegate to the World Engineering Congress, Tokyo, Japan, as representative of the A.S.H.&V.E. and the A.S.R.E., and presented a paper on air conditioning before the Congress. He is chairman of the Committee on Heat Transmission of the National Research Council, and a member of the Senate of the Department of Mechanical Engineering of Columbia University.

He has contributed many technical papers, the most outstanding of which are one on "Rational Psychrometric Formulae" and one on "Air Conditioning Apparatus"—both presented before the A.S.M.E. in 1911. These papers were the results of his investigations while with the Buffalo Forge Company, and constitute the foundation of the whole science of air conditioning.

He is a past president of the American Society of Refrigerating Engineers and of the American Society of Heating and Ventilating Engineers. He is also a member of the American Society of Mechanical Engineers.



Carrier, Mechanical Engineering
WILLIS H. CARRIER

*Cornell University 3: Cornell Engineers, 1935
[Cornell Alumni Records]*