

UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

THEME: Americans at Work  
SUBTHEME: "Science and Invention"

FOR NPS USE ONLY

RECEIVED

DATE ENTERED

**NATIONAL REGISTER OF HISTORIC PLACES  
INVENTORY -- NOMINATION FORM**

SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*  
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

**1 NAME**

HISTORIC Theodore W. Richards House

AND/OR COMMON

15 Follen Street

**2 LOCATION**

STREET & NUMBER 15 Follen Street

CITY, TOWN

Cambridge

\_\_\_ VICINITY OF

\_\_\_NOT FOR PUBLICATION

CONGRESSIONAL DISTRICT

5th

STATE

Massachusetts

CODE

25

COUNTY

Middlesex

CODE

017

**3 CLASSIFICATION**

CATEGORY	OWNERSHIP	STATUS	PRESENT USE
<input type="checkbox"/> DISTRICT	<input type="checkbox"/> PUBLIC	<input type="checkbox"/> OCCUPIED	<input type="checkbox"/> AGRICULTURE <input type="checkbox"/> MUSEUM
<input checked="" type="checkbox"/> BUILDING(S)	<input type="checkbox"/> PRIVATE	<input type="checkbox"/> UNOCCUPIED	<input type="checkbox"/> COMMERCIAL <input type="checkbox"/> PARK
<input type="checkbox"/> STRUCTURE	<input type="checkbox"/> BOTH	<input type="checkbox"/> WORK IN PROGRESS	<input type="checkbox"/> EDUCATIONAL <input type="checkbox"/> PRIVATE RESIDENCE
<input type="checkbox"/> SITE	<b>PUBLIC ACQUISITION</b>	<b>ACCESSIBLE</b>	<input type="checkbox"/> ENTERTAINMENT <input type="checkbox"/> RELIGIOUS
<input type="checkbox"/> OBJECT	<input type="checkbox"/> IN PROCESS	<input type="checkbox"/> YES: RESTRICTED	<input type="checkbox"/> GOVERNMENT <input type="checkbox"/> SCIENTIFIC
	<input type="checkbox"/> BEING CONSIDERED	<input type="checkbox"/> YES: UNRESTRICTED	<input type="checkbox"/> INDUSTRIAL <input type="checkbox"/> TRANSPORTATION
		<input type="checkbox"/> NO	<input type="checkbox"/> MILITARY <input type="checkbox"/> OTHER:

**4 OWNER OF PROPERTY**

NAME Cecil H. Smith

STREET & NUMBER

15 Follen Street

CITY, TOWN

Cambridge

\_\_\_ VICINITY OF

STATE

Massachusetts

**5 LOCATION OF LEGAL DESCRIPTION**

COURTHOUSE, Middlesex Registry of Deeds  
REGISTRY OF DEEDS, ETC.

STREET & NUMBER

3rd and Ottis Streets

CITY, TOWN

Cambridge

STATE

Massachusetts

**6 REPRESENTATION IN EXISTING SURVEYS**

TITLE None

DATE

\_\_\_ FEDERAL \_\_\_ STATE \_\_\_ COUNTY \_\_\_ LOCAL

DEPOSITORY FOR  
SURVEY RECORDS

CITY, TOWN

STATE

26

# 7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
<input checked="" type="checkbox"/> EXCELLENT	<input type="checkbox"/> DETERIORATED	<input checked="" type="checkbox"/> UNALTERED	<input checked="" type="checkbox"/> ORIGINAL SITE
<input type="checkbox"/> GOOD	<input type="checkbox"/> RUINS	<input type="checkbox"/> ALTERED	<input type="checkbox"/> MOVED    DATE _____
<input type="checkbox"/> FAIR (unrestored)	<input type="checkbox"/> UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

15 Follen Street was built in 1900. Although the Boston architectural firm of Warren, Smith, and Biscoe designed the house for Theodore W. Richards, Richards, a dedicated "do-it-yourselfer," took an active interest in its construction. He desired that his house be solidly built, for example, the builder used steel instead of lumber for support beams and there is five course brick in the first story walls. Apparently thinking of the cold winter months Richards decided to experiment and used seaweed between the brick courses as insulation.

The two story house does not follow any immediately recognizable architectural style. It is characterized by a brick first story and a shingled second story. From the front the building presents a completely symmetrical appearance with identical bays flanking the arched main entrance with its paladian style door. The house has a hip roof and two chimneys. The interior is characterized by a central hall floor plan. Although 15 Follen Street is a vernacular example of domestic architecture, it is judged to be of sufficient architectural interest to be included in Robert Rettig's Guide to Cambridge Architecture, 10 Walking Tours (1969).

15 Follen Street was the home of Theodore W. Richards from its construction in 1900 until his death in 1928. His widow continued to live in the house until 1941, when it was purchased by the present owner. The integrity of the building is whole. No significant changes or alterations have been made to either the exterior or interior since its construction.

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# 8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW			
<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> ARCHEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input checked="" type="checkbox"/> SCIENCE
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER
<input type="checkbox"/> 1800-1899	<input type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input type="checkbox"/> TRANSPORTATION
<input checked="" type="checkbox"/> 1900-	<input type="checkbox"/> COMMUNICATIONS	<input type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)
		<input type="checkbox"/> INVENTION		

SPECIFIC DATES 1900-1928

BUILDER/ARCHITECT Warren, Smith, and Biscoe

## STATEMENT OF SIGNIFICANCE

Theodore William Richards was born January 31, 1868, in Germantown, Pennsylvania. Both his father, a successful painter, and his mother were well educated and took an active interest in cultivating the intellectual capabilities of their children. Because of his parents dissatisfaction with the local schools, Richards received most of his elementary and secondary education at home from his mother. By the time he was fourteen he was ready for college and in 1882 he entered Haverford as a sophomore. While still studying at home he had developed an interest in chemistry which he pursued at Haverford where he graduated in 1885 with high honors. The same year he entered Harvard as a senior. For the next three years Richards immersed himself in his chemistry studies earning a bachelor's degree in 1886 and the Ph.D. in 1888. After receiving his Ph.D., Richards made the mandatory trip to Europe where he studied in Germany for a year. An instructorship in chemistry at Harvard awaited him upon his return to the United States. Harvard remained Richards' academic home for the rest of his life. In 1895 he again went to Europe for a year to study at Goettingen with Werner Nernst, one of Germany's most prominent chemists. In 1901 Goettingen offered Richards a research professorship, a coveted position in the German university system. He declined when Harvard matched the offer by promoting him to full professor. In 1912 Harvard appointed Richards to the Erving Professorship of Chemistry. Richards actively filled this chair until almost the day of his death on April 2, 1928.

When once asked by a professional publication to describe the areas of his interest in chemistry, Richards divided his work in five main categories: 1) atomic weights, 2) investigation of various problems concerning equilibrium, 3) original work upon chemical thermodynamics both practical and theoretical, 4) study of various problems in electrochemistry, and, 5) practical and theoretical work concerning the significance of atomic compressibility and the changes exhibited by atomic volumes under varying conditions.<sup>1</sup>

<sup>1</sup>James B. Conant, "Theodore William Richards," National Academy of Science Biographical Memoir Series, Vol. XLIV (Washington, 1974), p. 259.

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(Continued)

## 9 MAJOR BIBLIOGRAPHICAL REFERENCES

James B. Conant, "Theodore William Richards," National Academy of Science Biographical Memoir Series, Vol XLIV (Washington, 1974).  
 Eduard Farber, Great Chemists (New York, 1961).  
 D. H. Killeffer, Eminent American Chemists, (New York, 1924).  
 "Theodore William Richards," Dictionary of American Biography, 15 (New York, 1935).

## 10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY less than one acre

UTM REFERENCES

A	1, 9	3 2, 5 2, 3, 0	4, 6 1, 9, 3 7, 7, 0	B			
	ZONE	EASTING	NORTHING		ZONE	EASTING	NORTHING
C				D			

VERBAL BOUNDARY DESCRIPTION

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

## 11 FORM PREPARED BY

NAME / TITLE

James Sheire, Historian

ORGANIZATION

Historic Sites Survey, National Park Service

DATE

July 1975

STREET & NUMBER

1100 L Street NW.

TELEPHONE

202-523-5464

CITY OR TOWN

Washington

STATE

D.C. 20240

## 12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL

STATE

LOCAL

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

FEDERAL REPRESENTATIVE SIGNATURE

TITLE

DATE

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

DATE

DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION  
 ATTEST:

DATE

KEEPER OF THE NATIONAL REGISTER

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Richards made contributions to chemistry in each of these categories, but they were all based on or derived from the first; his life long interest in atomic weights. Richards interest in atomic weights began while he was a graduate student in the 1880's. When in 1910 he published Determinations of Atomic Weights, he was recognized as the leading expert on the subject in the world. Beginning with copper, Richards himself re-determined the atomic weights of barium, strontium, and zinc and later with the assistance of graduate students an additional twenty elements. Not only did Richards determine previously incorrect atomic weights with a precision that stands to the present day, he also developed both methodologies and apparatus which were of great value to the entire spectrum of physical chemistry. According to the Dictionary of American Biography, in over 300 papers in physical chemistry Richards proved that he was, "the foremost experimental chemist of his time."<sup>2</sup>

In 1914 the Nobel Prize committee recognized Richards' accomplishments in determining atomic weights by awarding him its coveted prize for chemistry. In awarding the prize the committee demonstrated that by the beginning of this century science in America had fully matured and was the equal of its European sister disciplines.

Richards major contributions to chemistry came as the result of his research, but he also made contributions to science in America as an outstanding teacher. While at Harvard, Richards built the chemistry department into one of the foremost centers of graduate instruction in chemistry in the country. He daily visited the work benches of his graduate students offering assistance and encouragement. In passing on to them his dedication to highly controlled experimentation and to patient precision, he helped develop a cadre of physical chemists who made significant contributions to chemistry in their own names and who influenced the growth and development of the discipline throughout the United States.

In recognition of Richards accomplishments the American and international scientific community bestowed on him its most prestigious awards and honors. In addition to the Nobel Prize for Chemistry (1914), he also received the Davy Medal (1910), the Faraday Medal (1911), the Gibbs Medal (1912), the

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<sup>2</sup>"Theodore William Richards," Dictionary of American Biography, 15 (New York, 1935), p. 556.

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(Continued)

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Franklin Medal (1922), and the Lavoisier Medal (1923). He belonged to all the important American societies, such as the National Academy of Science, and was an honorary member of numerous foreign scientific organizations. In 1925 Harvard established an honorary professorship in chemistry in his name.

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