

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

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

FOR NPS USE ONLY

RECEIVED

DATE ENTERED

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

1 NAME

HISTORIC

Percy Bridgman House

AND/OR COMMON

Bridgman House-Buckingham School

2 LOCATION

STREET & NUMBER

10 Buckingham Place

__NOT FOR PUBLICATION

CITY, TOWN

Cambridge

CONGRESSIONAL DISTRICT

8th

STATE

Massachusetts

__ VICINITY OF

CODE

25

COUNTY

Middlesex

CODE

017

3 CLASSIFICATION

CATEGORY

- DISTRICT
- BUILDING(S)
- STRUCTURE
- SITE
- OBJECT

OWNERSHIP

- PUBLIC
- PRIVATE
- BOTH
- PUBLIC ACQUISITION**
- IN PROCESS
- BEING CONSIDERED

STATUS

- OCCUPIED
- UNOCCUPIED
- WORK IN PROGRESS
- ACCESSIBLE**
- YES, RESTRICTED
- YES, UNRESTRICTED
- NO

PRESENT USE

- AGRICULTURE
- MUSEUM
- COMMERCIAL
- PARK
- EDUCATIONAL
- PRIVATE RESIDENCE
- ENTERTAINMENT
- RELIGIOUS
- GOVERNMENT
- SCIENTIFIC
- INDUSTRIAL
- TRANSPORTATION
- MILITARY
- OTHER

4 OWNER OF PROPERTY

NAME

Buckingham, Browne, and Nichols School

STREET & NUMBER

Gerry's Landing

CITY, TOWN

Cambridge

STATE

Massachusetts

__ VICINITY OF

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE,
REGISTRY OF DEEDS, ETC

Middlesex Registry of Deeds, Southern District

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

68

7 DESCRIPTION

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

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

Ten Buckingham Place is a two-and-one-half story frame structure. It was constructed around 1920. The architect is unknown. The design is neo-rationalism. The house and three others similar to it in the same subdivision are not mentioned in the Cambridge Historical Commission's study of Cambridge architecture (Old Cambridge, 1973). The house does not appear to be of architectural importance.

Percy Bridgman moved into 10 Buckingham Place in 1928. It remained his home until his death in 1961. The Buckingham School, a private elementary school, acquired the property at this time and has occupied it since. At the present time Bridgman's house functions as a residence and faculty lounge.

The integrity of 10 Buckingham Place is whole. No significant changes have been made to the property since Professor Bridgman's death in 1961.

72

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

BUILDER/ARCHITECT

STATEMENT OF SIGNIFICANCE

Percy Williams Bridgman, the fifth native born American to be awarded the Nobel Prize in physics, was born April 21, 1882, in Cambridge, Massachusetts. While still a boy his family moved across the Charles to Newton where Bridgman grew up. In 1900 he entered Harvard where he received his entire higher education first in the college and later in the graduate school. Bridgman never left Harvard. Upon receiving his PhD in 1908, he was appointed to the physics faculty. In 1919 he was chosen for the chair of Hollis Professor of Mathematics and Natural Philosophy and 1950 he was appointed Huggins University Professor. He assumed the position of professor emeritus in 1954 at the age of 72.

Bridgman was noted for simplicity, directness, and the rugged individualism of his New England, Yankee, background. Although always primarily a physicist, he also wrote extensively on political and social subjects. He disliked dogma and affectation of any kind and was a staunch supporter of the virtues of common sense and pragmatism. If any idea could not be proven, Bridgman regarded it as meaningless. He applied this basic attitude to his own mortality. In 1961 upon learning that he suffered from a terminal cancer, Bridgman committed suicide. A note found in his pocket read, "It isn't decent for society to make a man do this thing himself. Probably this is the last day that I will be able to do it myself."

Bridgman's career involved him in three distinct but related types of activity. His major interest was physics. Using the methodology he had devised in his physics research as a guide, he also wrote extensively on the epistemology of science in general. Finally he was a teacher of the first rank.

Unlike many physicists of the period, Bridgman did not take a great interest in the new developments in relativity and quantum physics. He was a traditional physicist concerned with the study of the mechanical and electrical properties of matter. His major contribution to physics was as a pioneer in the investigation of these properties under high pressure.

In conducting his high pressure research Bridgman combined his expertise in physics with sophisticated mechanical ability. Beginning around 1908 he designed and built his own apparatus for increasing pressures. He was

69

(CONTINUED)

9 MAJOR BIBLIOGRAPHICAL REFERENCES

Issac Asimov. The Intelligent Man's Guide to Sceince (New York, 1960).
 Percy Williams Bridgman. Reflections of a Physicist (New York, 1955).
 Edwin C. Kendle and Francis Birch. "Percy Williams Bridgman," National Academy of Sciences Biographical Memoirs, Vol. XLI (New York, 1970)
 Niels Heathcote. Nobel Prize Winners in Physics (New York, 1953).

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY less than one acre

UTM REFERENCES

A	19	324725	4693830	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

National Park Service - Historic Sites Survey

DATE

February 1975

STREET & NUMBER

1100 L Street NW.

TELEPHONE

CITY OR TOWN

Washington,

STATE

D.C.

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

73

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

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

FOR NPS USE ONLY

RECEIVED

DATE ENTERED

Percy Bridgman House

CONTINUATION SHEET

ITEM NUMBER

8

PAGE

2

always proud of his mechanical ability and regarded his most important contribution to physics not to have so much the results of his research on new forms of solids, but rather his discovery of a method of producing high hydrostatic pressure without leak. In 1914 Bridgman published his first important paper, "The Techniques of High Pressure Experimentation." By the 1920's, when he had refined his equipment to the point that he could submit elements to pressures as high as 20,000 atmospheres, he was acknowledged as the leading student in the field of high pressure physics. Bridgman's book, The Physics of High Pressure, (1931) was for many years the standard work on the subject. In 1946 the Nobel committee recognized the importance of Bridgman's researches and awarded him the Noble Prize. The citation read, "For the invention of apparatus for obtaining very high pressures, and for the discoveries which he made by means of this apparatus in the field of high pressure physics." The most spectacular applied result of Bridgman's techniques and research came in 1955 in the General Electric research labs with the creation of artificial diamonds.

In addition to his contributions to physics, Bridgman also studied the epistemology and methodology of physics. The fruit of these reflections was first published in 1927 in The Logic of Modern Physics and later deepened in The Nature of Physical Theory (1936). In these works Bridgman formulated his conception of "operational analysis." According to a fellow physicist, operational analysis means that "...the ultimate meaning of every physical concept is bound up with the physical and mental operations by which it is measured and tested." More simply, Bridgman's concept of operational analysis meant that no hypothesis or theory of physics had any meaning until its validity was proven by experimentation. Bridgman was a pure empiricist. In The Intelligent Individual and Society (1936) Bridgman attempted to apply operational analysis to sociological questions, but the effort failed to invoke a significant response. In his final works, Reflections of a Physicist (1955) and The Way Things Are (1959) Bridgman summed up his ideas on physics and society.

Percy Bridgman's significance in the history of science in America is that he was one of the countries great physicists. His contributions to the knowledge of high pressure physics earned him world wide reputation and the Nobel Prize. His concept of operational analysis is also significant.

(CONTINUED)

70

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

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

FOR NPS USE ONLY

RECEIVED

DATE ENTERED

Percy Bridgman House

CONTINUATION SHEET

ITEM NUMBER 8 PAGE 3

As the physical sciences scored one triumph after another in unraveling nature's secrets, the belief arose that the methodology of the physical and biological sciences should be applied to all reality. Areas of knowledge that had traditionally belonged to the humanities or the liberal arts became sciences. When Bridgman attempted to apply his operational analysis concept to sociology, he demonstrated the extent of the inroads of the physical sciences into all realms of knowledge. Although not successful at the time, Bridgman's operational analysis was later adopted by social scientists. Today terms like "operational" and "to operationalize" are common in the jargon of many social sciences. The basic meaning is the same as Bridgman's. Any concept is valid only insofar as it can be proven or put into practice in an empirical situation. Bridgman is thus an illustration of the influence of the concepts and methodology of the physical and biological sciences in 20th century scholarship.

71