Blue Hill Observatory

125 Years Watching the Weather

Blue Hill Observatory is home of the oldest continuous weather record in all of North America, dating back to 1885.

Abbott Lawrence Rotch founded Blue Hill Observatory in his twenty-fourth year.

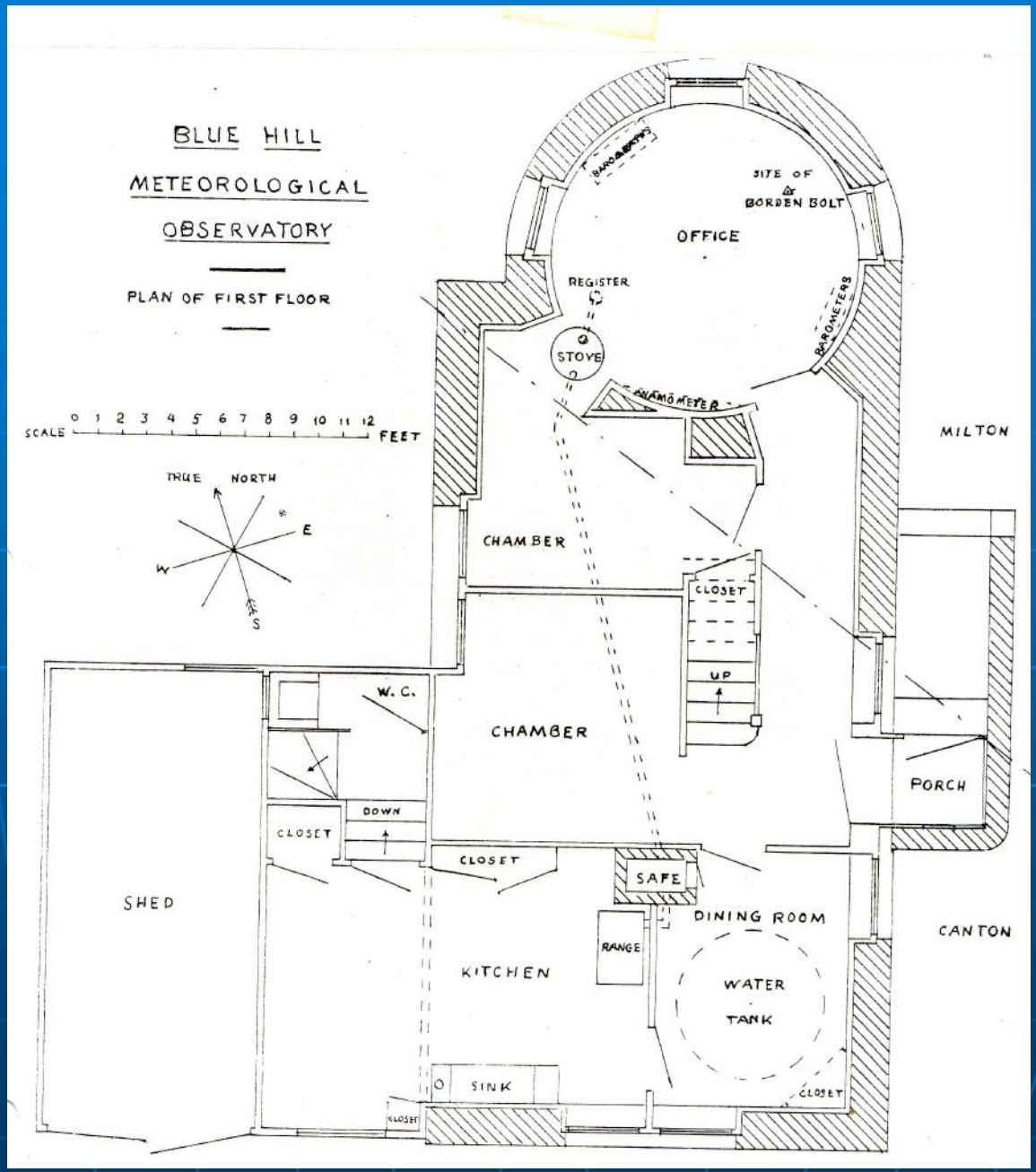
- He possessed unusual energy
- He was well educated
- He frequently traveled abroad
- He spoke German and French
- He was trained in business
- He was financially secure

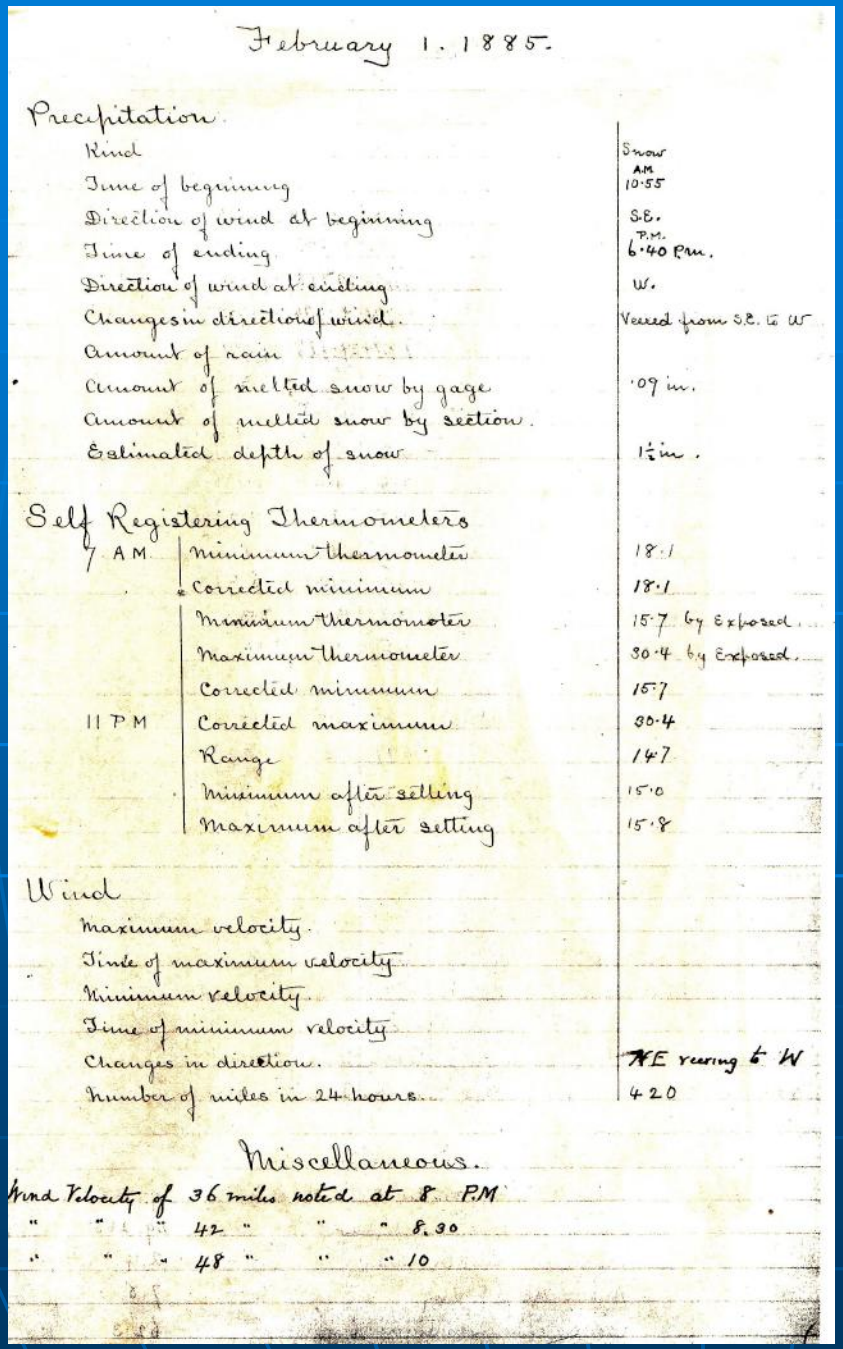
Rotch chose 635-foot Great Blue Hill in Milton, Massachusetts for his new weather observatory.

The building was designed by his architect brother Arthur Rotch.

Construction began on 18 October, 1884 at a fixed cost of $3,500.

At midnight on 31 January 1885 a red fire and rockets announced the official opening of the Blue Hill Meteorological Observatory.


BLUE HILL
METEOROLOGICAL
OBSERVATORY
PLAN OF FIRST FLOOR
SCALE 0 1 2 3 4 5 6 7 8 9 10 11 12 FEET
TRUE NORTH
N
E
S
W
SITE OF BORDEN BOLT
OFFICE
REGISTER
STOVE
BAROMETERS
ANEMOMETER
MILTON
CHAMBER
CLOSET
UP
W. C.
CHAMBER
PORCH
DOWN
CLOSET
CLOSET
SAFE
SHED
DINING ROOM
CANTON
RANGE
KITCHEN
WATER
TANK
SINK
CLOSET
CLOSET



February 1. 1885.

Precipitation

Kind	Snow
Time of beginning	A.M. 10.55
Direction of wind at beginning	S.E.
Time of ending	P.M. 6.40 P.m.
Direction of wind at ending	W.
Changes in direction of wind	Veered from S.E. to W
Amount of rain	
Amount of melted snow by gage	.09 in.
Amount of melted snow by section	
Estimated depth of snow	1½ in.

Self Registering Thermometers

7 A.M.	Minimum thermometer	18.1
	Corrected minimum	18.1
	Minimum thermometer	15.7 by Exposed
	Maximum thermometer	30.4 by Exposed
	Corrected minimum	15.7
11 P.M.	Corrected maximum	30.4
	Range	14.7
	Minimum after setting	15.0
	Maximum after setting	15.8

Wind

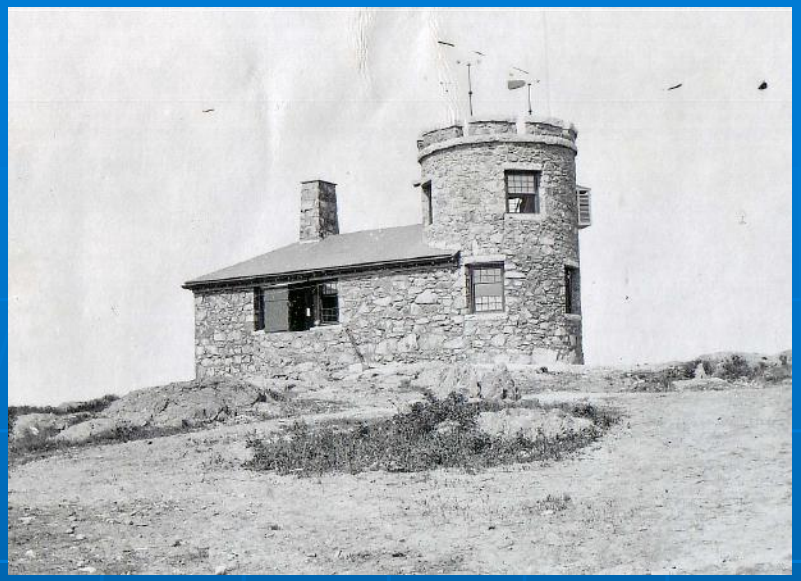
Maximum velocity	
Time of maximum velocity	
Minimum velocity	
Time of minimum velocity	
Changes in direction	~~N~~E veering to W
Number of miles in 24 hours	420

Miscellaneous.

Wind Velocity of 36 miles noted at 8 P.M
" " " 42 " " " 8.30
" " " 48 " " " 10

Hand-written records from first day of observations on 1 February, 1885

Three views of the new Observatory



Northeast

South

West

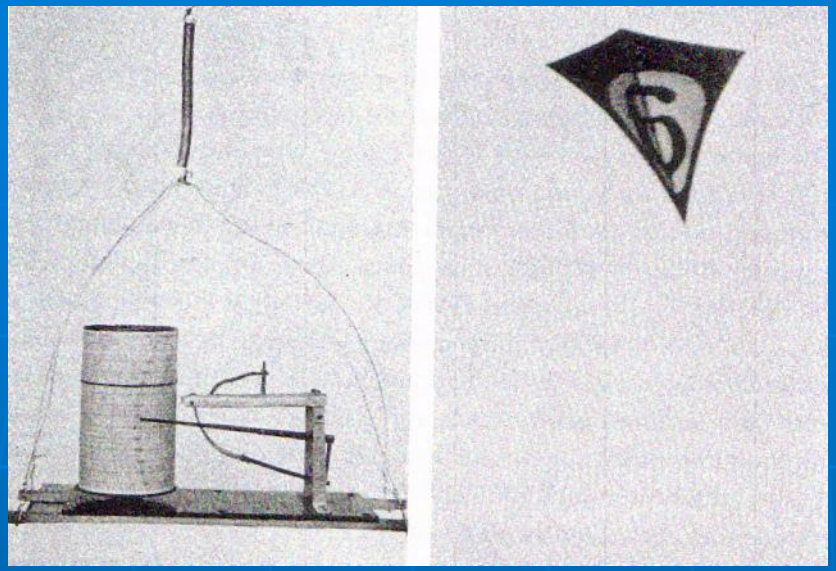
Rotch seated at his desk in first floor office

Second floor of old tower after sheathing

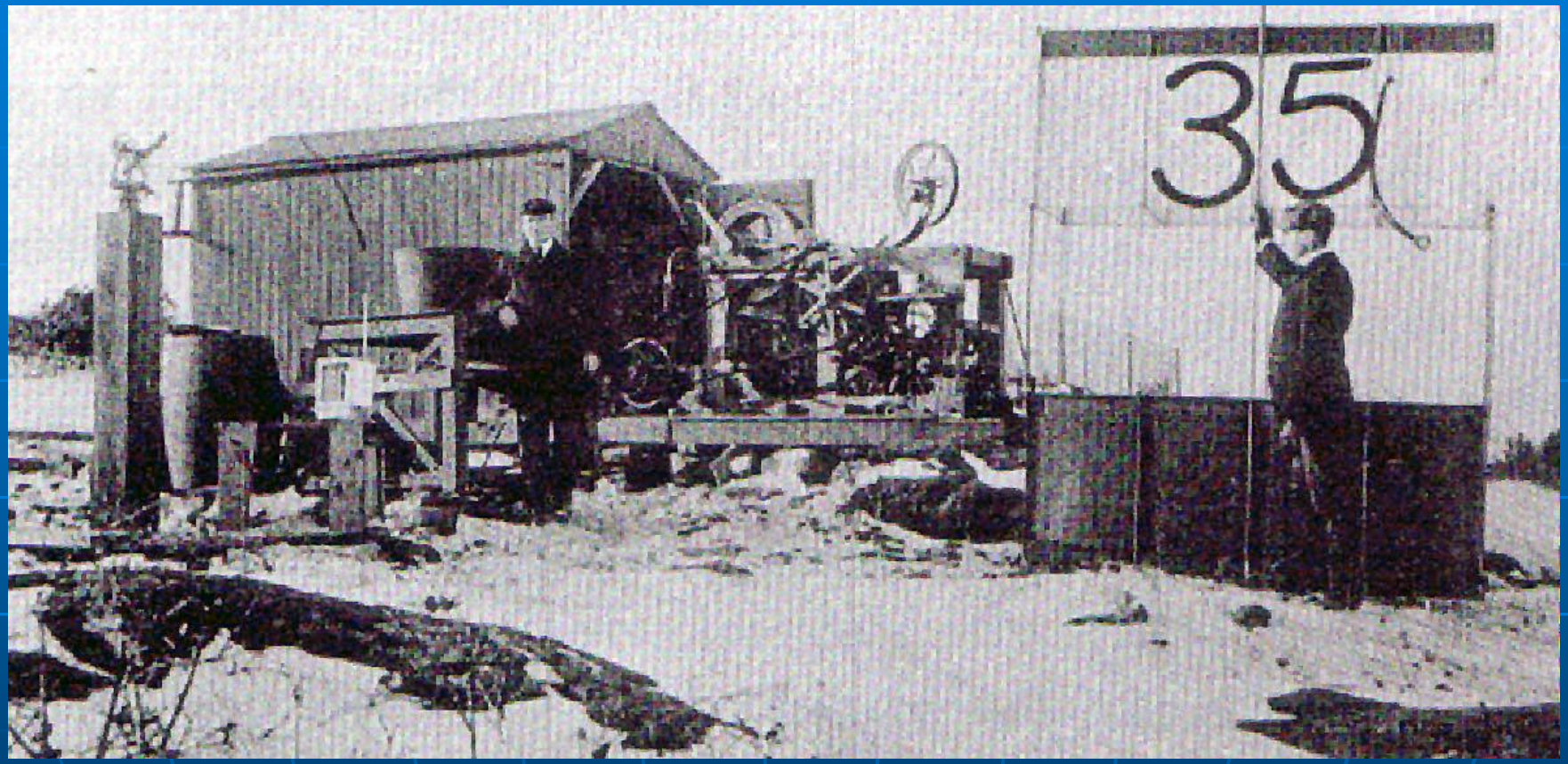
Colored flags alerted neighbors to changes in the weather

Henry Helm Clayton, age 24, arrived at the Observatory in 1886. His interest in clouds led to the first detailed cloud statistics in America and provided the first basic climatology of cloud types, height, and velocity in the Western Hemisphere

An east wing library was added in 1889

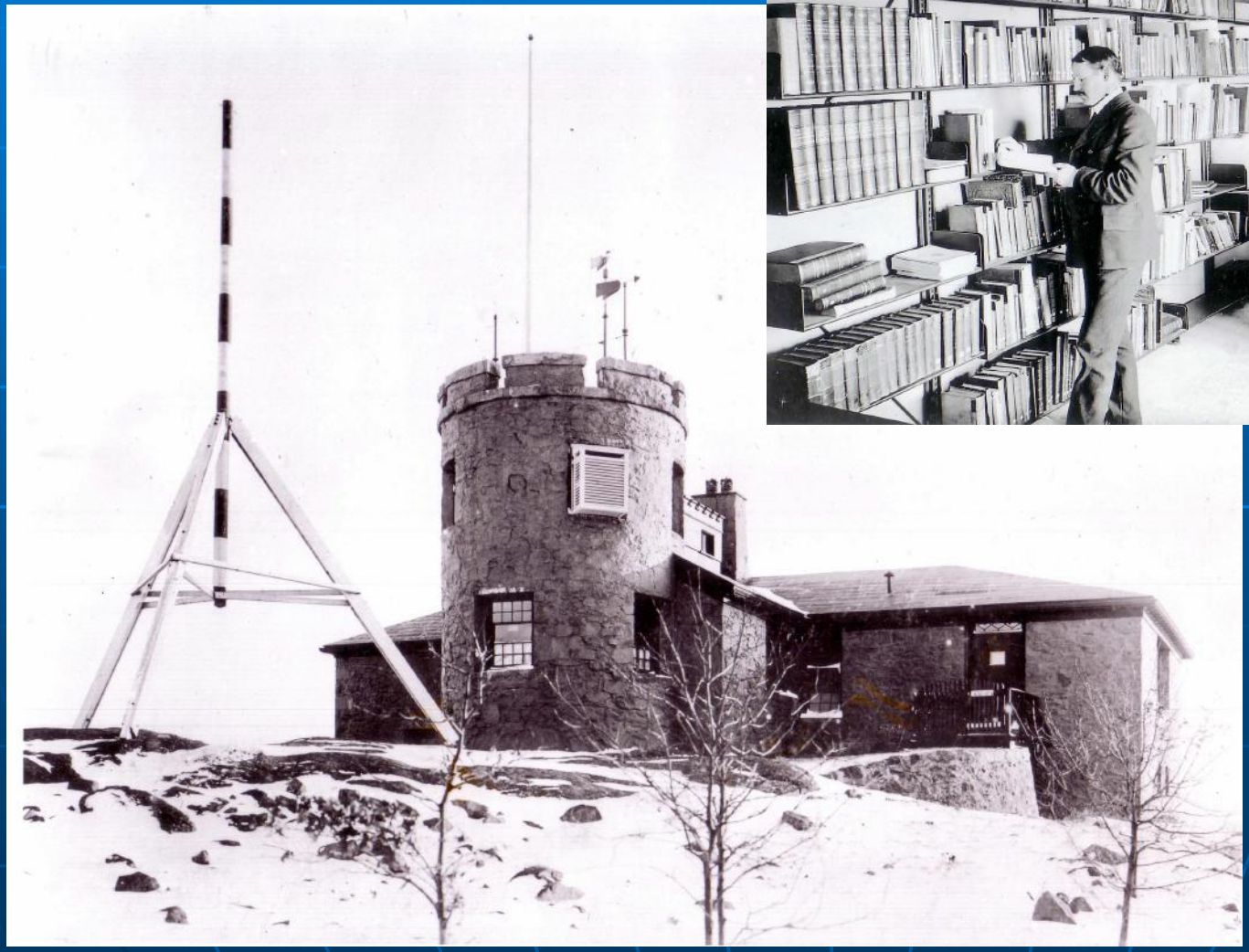


On 4 August 1894 using a series of Malay tail-less kites, a thermograph was carried aloft to an altitude of 1,400 ft.



Steam-driven windlass used in kite soundings beginning in March,1897

1902 - new west wing was completed



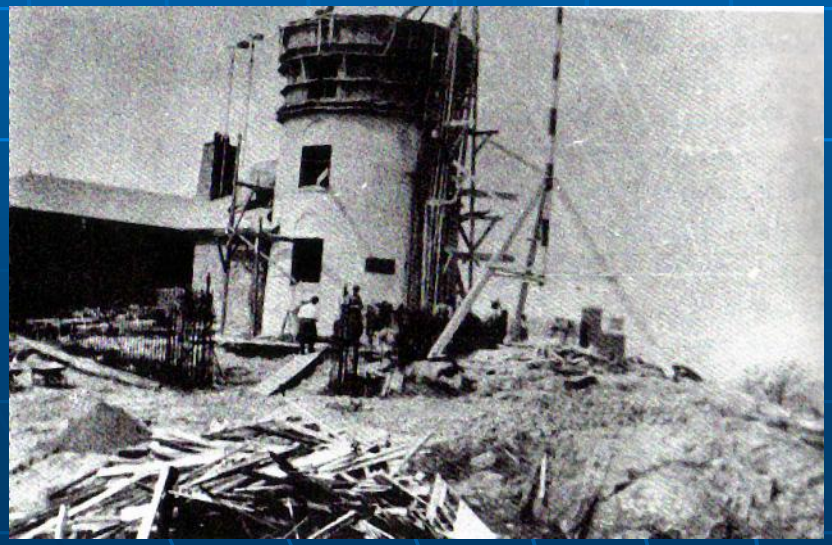
June 26, 1903 the new library opens

1905 - Concrete wall and iron fence erected around Observatory

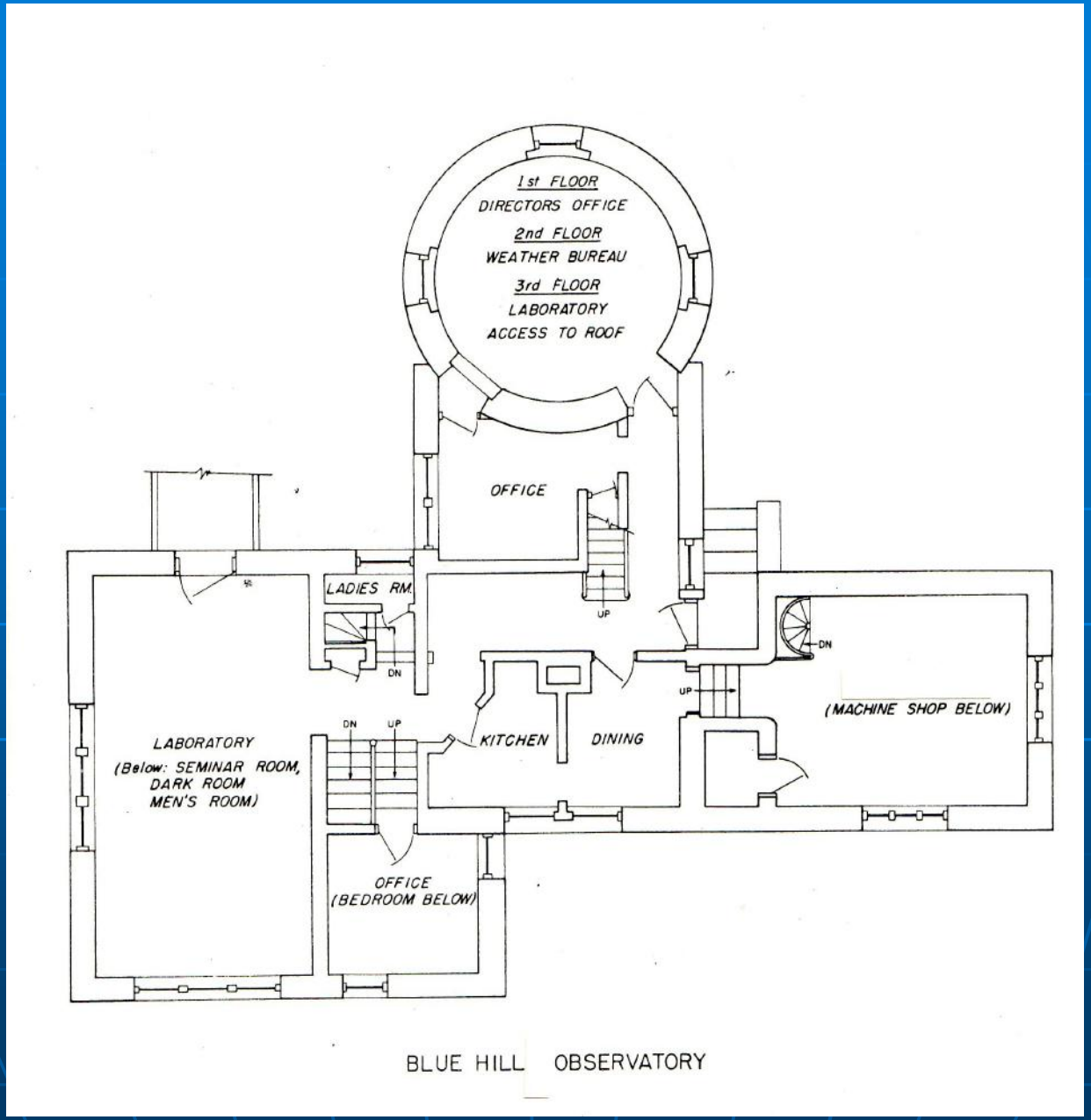
New three-level tower construction began on 25 March, 1908.

4 June, 1908 new tower completed.

- 800 tons of concrete mixed by hand and hauled up in buckets
- Anemometers moved to chimney
- Parapet of tower notched to form a perfect compass



- Tower completed at a cost of $5,000



BLUE HILL OBSERVATORY

1912

Rotch dies suddenly

1913

Harvard College takes over Observatory

Alexander McAdie appointed Director

Dr. Charles Franklin Brooks was Director from 1931 to 1958

- Restored the observing program
- Restored Mt. Washington and trained the observers
- Co-founder of the American Meteorological Society in 1919

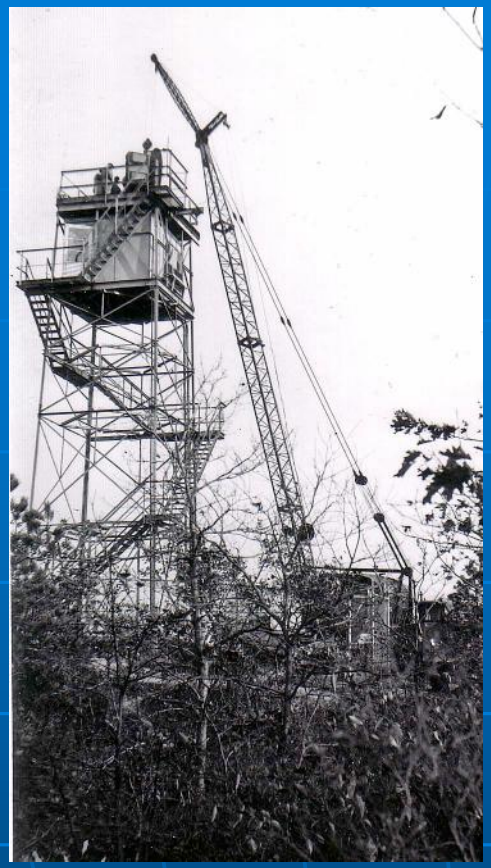
1935 - first successful radio-meteorograph transmission from a free balloon was made.

1936 - balloon launcher was completed

THE BLUE HILL METEOROLOGICAL OBSERVATORY OF HARVARD UNIVERSITY, MILTON, MASSACHUSETTS

21 September, 1938

Observatory survives wind gust of 186 mph in Great New England Hurricane



1954 - Weather radar installed on Great Blue Hill

1959 - U.S. Weather Bureau takes over climatological observations


Blue Hill Observatory
Our Mission
The mission of the Blue Hill Observatory and Science Center is to foster public understanding of and appreciation for atmospheric science, while continuing to maintain a meticulous record of weather observations and long-term study of climate.
© M J Iacono


Help us
Preserve
Maintain
Grow
www.bluehill.org