

P40354601

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

DATA SHEET

FOR NPS USE ONLY
RECEIVED AUG 2 1976
DATE ENTERED DEC 15 1976

**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

~~The~~ Locomotive "Lion"

AND/OR COMMON

2 LOCATION

STREET & NUMBER

University of Maine at Machias

__NOT FOR PUBLICATION

CITY, TOWN

Machias

CONGRESSIONAL DISTRICT

__ VICINITY OF

2nd, Hon. William Cohen

STATE

Maine

CODE

23

COUNTY

Washington

CODE

029

3 CLASSIFICATION

CATEGORY

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

OWNERSHIP

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

N/A 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

University of Maine at Machias

STREET & NUMBER

CITY, TOWN

Machias

__ VICINITY OF

STATE

Maine

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE,
REGISTRY OF DEEDS, ETC.

None

STREET & NUMBER

CITY, TOWN

STATE

6 REPRESENTATION IN EXISTING SURVEYS

TITLE

DATE

__FEDERAL __STATE __COUNTY __LOCAL

DEPOSITORY FOR
SURVEY RECORDS

CITY, TOWN

STATE

7 DESCRIPTION

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

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The over-all dimensions of the frame of the locomotive Lion are 12'5" x 7'4"- $\frac{1}{2}$ ". The outside frame is made of 4 $\frac{1}{2}$ " x 2 $\frac{3}{4}$ " oak bound with $\frac{1}{2}$ " Norway iron strapping around the outside. Approximately 14" from each side of the outside frame are two oak stringers running lengthwise and reinforced with $\frac{1}{2}$ " strap iron on each side. In spite of the fact the Lion is in its one hundred and thirty-seventh year, the oak is perfectly sound. The boiler of the locomotive rests on two iron supports fastened to the stringers - one at the center, and one at the front end. The fire box end is held rigidly by angle irons bolted to the frame.

The boiler was constructed in the same manner as common boilers of today. This particular boiler was made up of five sections, and designed and constructed to carry 100 pounds pressure. The steam dome where the dry steam collected is located in the center of the boiler which was an English idea. The steam was piped from the dome through the boiler to the steam chest, where it did its expansive work in the cylinders and was exhausted up through the stack.

The tubes connect the tube sheet in the fire box to the tube sheet on the head of the boiler. The hot gases from the fire passed through the tubes and caused the water surrounding them to be heated. The gases were then drawn into the smoke box and up the stack by the exhaust steam from the cylinders. When these hot gases entered the smoke box they passed around the live steam pipes which lead into the steam chest. In this way loss by radiation from the live steam in these pipes was reduced to a minimum.

The loss of heat from the boiler and cylinders either by radiation or convection was reduced by covering the boiler and cylinders with 7/8" wood lagging which is a very poor conductor of heat. The wood in turn was wrapped with a very thin covering of iron, sometimes called Russia iron.

The conical shape of the smoke stack of this locomotive has an odd appearance. However, there was a reason for constructing it in this manner. When bituminous coal, or wood was burned, this type was used and when anthracite coal was burned, the straight vertical type was used. Since this locomotive was a wood burner, the conical shape was employed and a wire netting placed on the top of the stack served as a screen allowing the smoke to escape but retaining the sparks and hot cinders which dropped into the smoke box. These were removed from the front of the smoke box by a door which gave access to the inside. The conical shape of the stack was intended to deflect the sparks and cinders which came up through the stack with the blast from the exhaust. They then dropped down the sides and into the smoke box.

The outline of this particular locomotive is not beautiful but the construction is rugged, especially when one considers that it was in actual operation for fifty years and no serious replacement was ever made.

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 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 checked="" type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER	
<input checked="" type="checkbox"/> 1800-1899	<input checked="" type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input checked="" type="checkbox"/> TRANSPORTATION	
<input 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

1840

BUILDER/ARCHITECT

STATEMENT OF SIGNIFICANCE

From a historic point of view the value of the locomotive Lion cannot be over estimated especially when one considers its age. It is also interesting from an engineering point of view when it becomes evident that within a period of 136 years the basic mechanical changes which have taken place in the mechanism of steam locomotive are very few and consist mostly of refinements.

The locomotive Lion was built in Boston in 1840 by the firm of Hinkley and Drury which later merged into the firm of Hinkley and Williams who continued to build locomotives for many years. A similar locomotive, named the Tiger, was also built the same year, which was practically a duplicate of the Lion. These two locomotives which developed 100 horse-power were built expressly for the Whitneyville and Machiasport Railroad Company and they did actual duty for a period of fifty years.

The Whitneyville and Machiasport Railroad was the second steam railroad in Maine (the first being the Old Town Railroad Company, chartered in 1832), and was operated by the Boston Eastern Mill and Land Company, organized in 1833, for the purpose of doing a general lumber business at Middle Falls now Whitneyville. The road was started in 1840 and completed in 1842 for the sole purpose of transporting the lumber from Middle Falls to Machiasport or to the tide water. The track was 4 feet 8- $\frac{1}{2}$ inches gauge and consisted of flat bars of iron laid on top of 2 x 3 inch wooden stringers, which rested on 8 x 8 inch timbers supported by 8 x 8 inch ties. The first engine used was the Phoenix, built in England and leased from the Eastern Railroad of Boston. In the meantime, the two locomotives, the Lion and the Tiger, were being built for the Boston and Eastern Mill and Land Company. The actual date of their operation is not known to the writer, but it is known that they were contracted for in 1840. After 1866 the Whitneyville Agency succeeded the Boston and Eastern Mill and Land Company which in turn was dissolved in 1896, and the Sullivan family of Whitneyville then became the sole owners. Through the efforts of the Sullivans and Alderman Rounds of Portland, the Lion now belongs to the University of Maine, at Machias where it rests to give future generations a true conception of an early steam locomotive.

