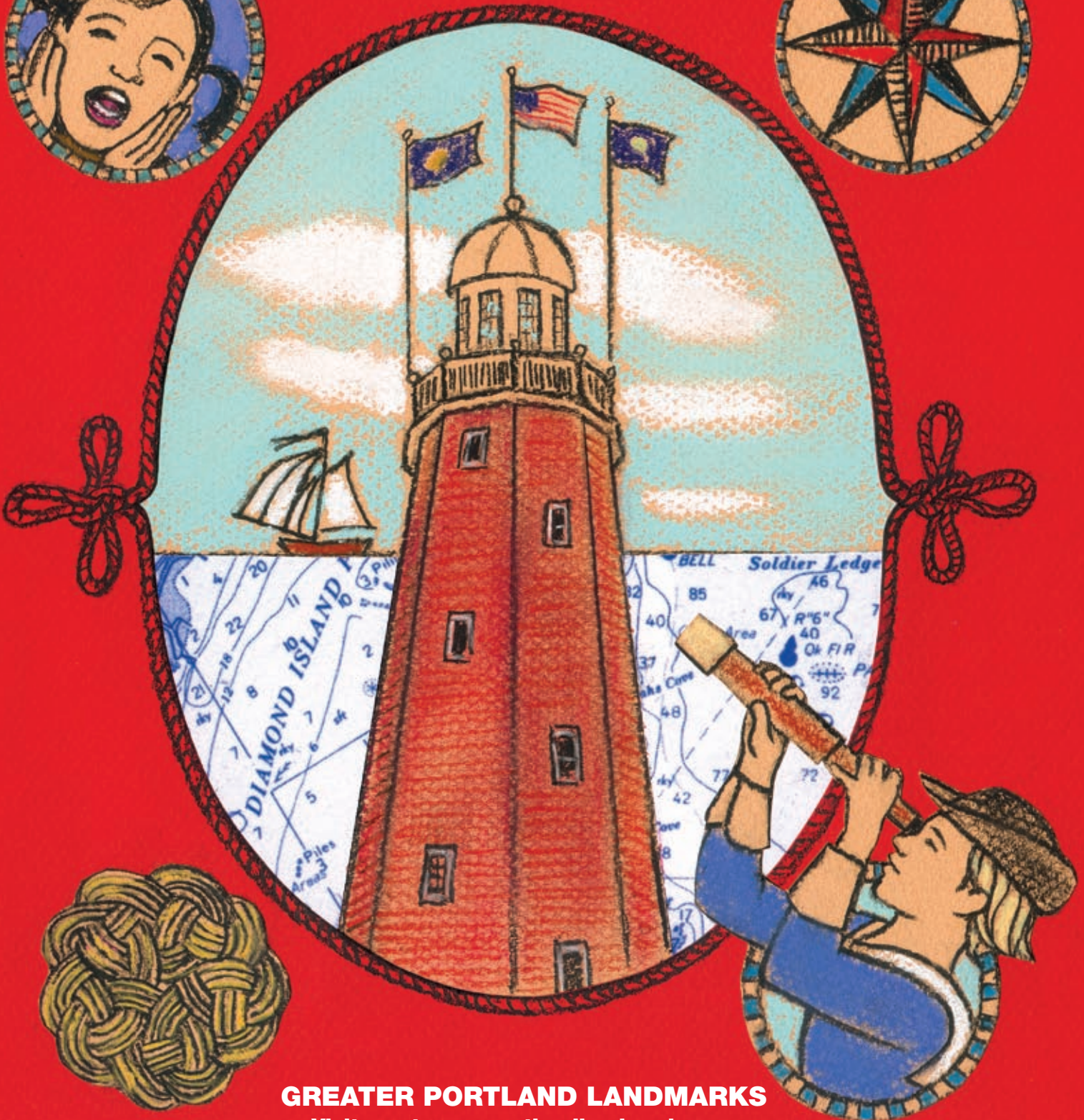


The Portland Observatory *An Activity Book*



GREATER PORTLAND LANDMARKS
Visit us at www.portlandlandmarks.org



In this book, you'll learn all about the famous Observatory, the man who built it, how it was used, and how important it is today. Along the way you'll get the chance to work on fun activities all about the Observatory.

The Portland Observatory: An Activity Book

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*Greater Portland Landmarks promotes preservation and revitalization of historic buildings, neighborhoods, and landscapes and encourages high-quality new architecture to enhance the livability and economic vitality of Portland and surrounding communities.
www.portlandlandmarks.org*

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DANIEL T. HALEY

A G E N C Y
I N S U R A N C E
HONESTY & INTEGRITY YOU CAN DEPEND ON.

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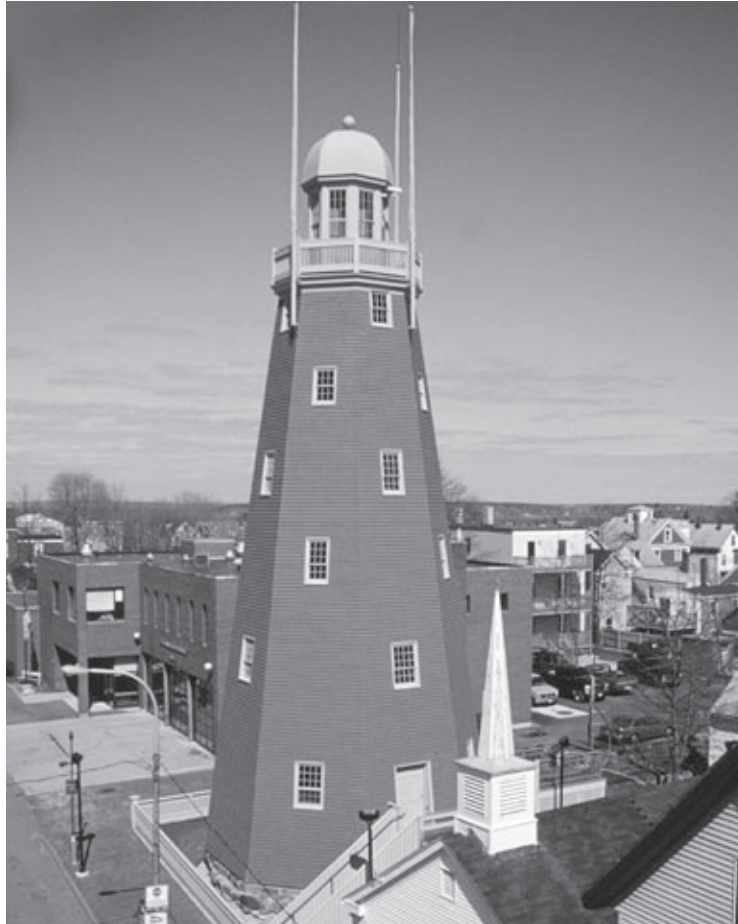
JanWillem Musters

Maine Historical Society

Ren Wilkinson

Do you recognize this building?

Chances are you've seen it before. It is called the Portland Observatory and it's one of our city's most historic **landmarks**. Do you know what a landmark is? A landmark is highly visible. Many people recognize it and know where it is. A landmark looks different or special.



© TIMOTHY P. BYRNE

ACTIVITY

Can you think of other landmarks in Portland or in your town?

Landmark: A special building or place, often being preserved by a city or country for its importance.

A Busy Seaport

Portland has been a busy seaport for hundreds of years. Back in the 1800s, the harbor shorefront was crowded with **wharves** for sailing ships. The docks were busy with people hurrying to load and unload cargo from all over the world. This time period was known as “The Golden Age of Sail.”

ACTIVITY

Look at this drawing of the Port of Portland in the 1860s. Can you see the Observatory?

How many boats do you see in the sketch? _____

How might a picture of Portland today look different? _____

Wharf: A landing place where ships can tie up and load or unload (plural: wharves).

VIEW OF PORTLAND, CA. 1865, MAINE HISTORICAL SOCIETY



In 1767, a boy named Lemuel Moody was born in Portland. He was one of ten children! When Lemuel was just 13 years old, he joined the Navy and went off to sea as a **water boy**. Lemuel was very intelligent and soon became a ship captain, sailing all over the world.



Look at Lemuel Moody.

Do you wear the same kind of clothes people wore then?

Name one item of clothing that has changed:

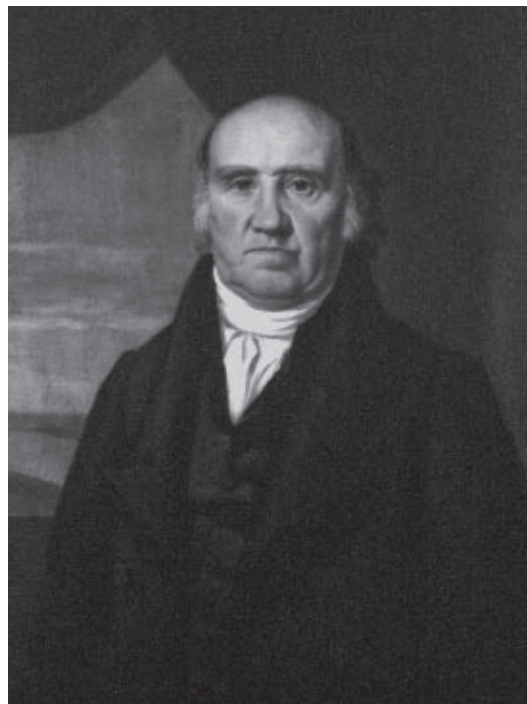
Water boy: A helper who supplies drinking water to people on a ship.



After many years, Captain Moody returned home with an idea.

In a time when there were no radios or telephones, he wanted people to have a way to communicate about the ships coming into the harbor after months away at sea. Portland Harbor's shape and sheltering islands hide ships from view until they are nearly home.

With a way to know that ships were approaching ahead of time, owners could prepare for the ships' arrival and clear dock space for loading and unloading.



PORTRAIT OF LEMUEL MOODY, MAINE HISTORICAL SOCIETY

In 1807 Captain Moody started to build the Portland Observatory. "Observatory" comes from the word "observe," which means "to watch."

His idea:

- Build a tower high up on a hill.
- Put a powerful **telescope** at the top for observing far-away ships.
- Use flags – a different flag for each ship – as a system that people all over town would recognize. As each ship approaches the harbor, raise its flag.
- Make a business out of it – ship owners paid Captain Moody to fly their ship's flag when the ship was coming in.

Telescope: A device used to observe distant objects.

Building the Tower

Captain Moody needed a good view of the harbor so that he could see the ships far away. He picked a spot high on Munjoy Hill.

He needed strong wooden beams to make it sturdy. He chose timbers from eight giant pine trees and had them floated down the Presumpscot River.

Teams of oxen dragged the beams up Munjoy Hill. Then, workers fitted the eight-sided tower together using a technique called “**post-and-beam.**”

He wanted the tower to be steady, so he weighed it down with 122 tons of stone at the bottom (also known as **ballast**).



He built stairs all the way to the building’s top level, called the **lantern**, where he could watch for the ships. He painted a **compass rose** in the lantern so he could judge direction, and he hung his new telescope from the ceiling. Finally, he built an outside deck around the lantern and tall flagpoles for raising the flags. Now Captain Moody was ready to start **signaling!**

Post-and-beam: Made with a frame of vertical and horizontal wooden beams.

Ballast: Heavy material, such as stone, that is placed in the bottom of a ship to weigh it down so that it floats upright.

Lantern: A structure built on top of a roof with open or windowed walls to let in light and air.

Compass Rose: A circular, and usually colorful, drawing that shows directions (North, South, East, West).

Signaling: Communicating using objects like flags, which can be seen from a distance.

Moody Did it All

Captain Moody was an **entrepreneur**. He lived to be 67 years old, and during that time he took many roles. In addition to being an **architect** for the Observatory, he made maps of the harbor and also recorded the weather.

ACTIVITY

Unscramble the words below, and, using the pictures as clues, find out about all of the things he did.



ATNIPCA

TENWEHAMAR



Entrepreneur: Someone who takes risks and starts a business.

Architect: Someone who designs and supervises the construction of a building.

KPAMERMA



WERIRT



THIRACETC



Munjoy Hill: The Early Days

On Munjoy Hill today, there are houses, shops, and schools. Back in 1807 it was pastureland. Moody decided to build his own house next to the tower, along with stables, a banquet hall, a dance hall, a tavern, and even a bowling alley! It was the kind of place where the people of Portland liked to gather to spend the day. Captain Moody even let some ship captains' wives look through the telescope for their husbands' ships. He also made money by letting people climb to the top to see the wonderful views.

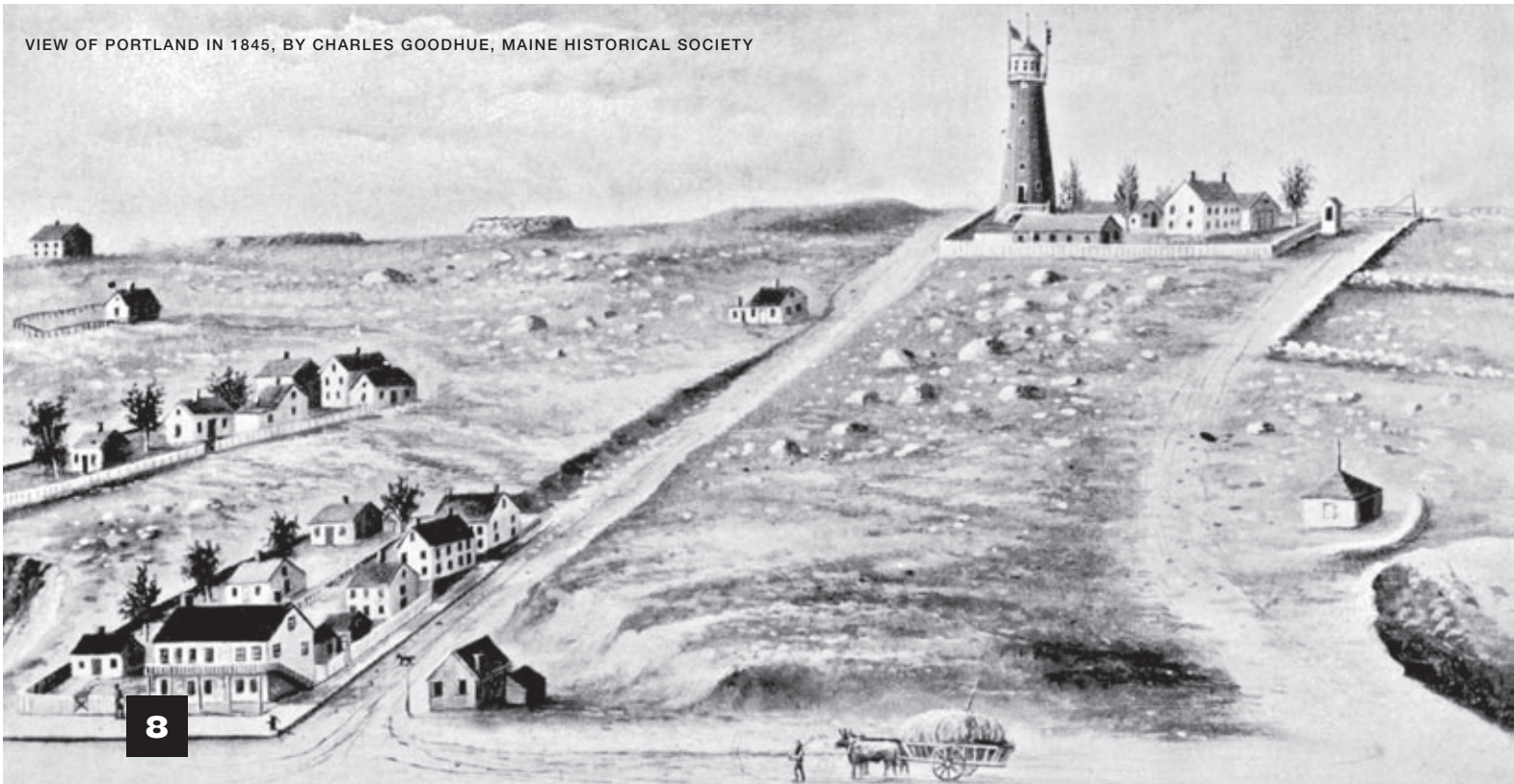


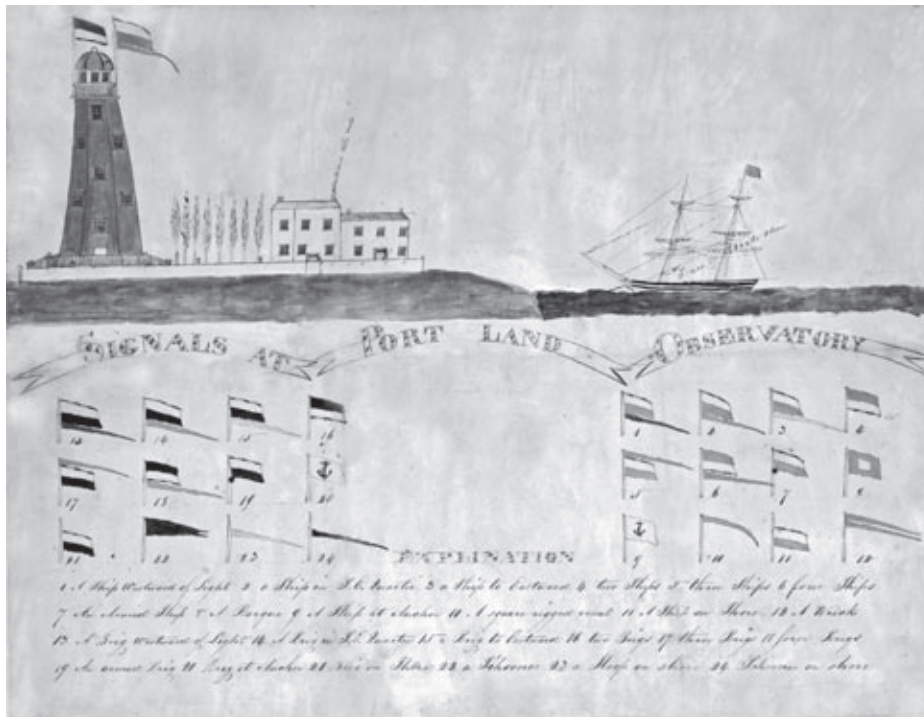
THE LANTERN AT THE OBSERVATORY, 1939,
BY ROGER DEERING, GREATER PORTLAND LANDMARKS

ACTIVITY

What do you see in this sketch of Munjoy Hill that you wouldn't find today?

VIEW OF PORTLAND IN 1845, BY CHARLES GOODHUE, MAINE HISTORICAL SOCIETY





SIGNALS AT THE PORTLAND OBSERVATORY, 1807, BY LEMUEL MOODY, MAINE HISTORICAL SOCIETY

How it Worked

Captain Moody spent a lot of time in his tower. He would climb the 103 stairs to the top several times a day to look through his telescope and spot ships. When he saw one approaching Portland Harbor, he would raise a flag to signal whose ship it was. People down on the waterfront could look up to the top of the Observatory, see the flags, and get ready for the ship to arrive. With so many different types of **vessels** and so many owners, Captain Moody had to have many flags. To earn money, he asked every ship owner to pay him \$5 a year to fly that ship's flag when it approached the harbor.

ACTIVITY

If Captain Moody had 25 ship owners using his signaling service during one year, how much money did he earn that year? _____

Vessel: A boat or ship.

Over the years, Portland Harbor has been home to many different types of boats, each with a different purpose, and each with a different way of moving through the water.

Try to match each definition to the correct boat.

First used by Native Americans, these light, open, slender boats rely on the people inside using paddles.

A small, one-masted sailing vessel which relies on the wind for travel.

A ship powered by one or more steam engines, propellers or paddle wheels.

A cargo ship designed to carry large amounts of crude oil.

A passenger ship used for pleasure trips.

World War II cargo ship built in South Portland in the 1940s.

A small powerful boat designed for towing or pushing larger vessels.

A boat that brings people or vehicles across a body of water and operates on a regular schedule.



A. Steamship



B. Oil Tanker



C. Ferry



D. Cruise Ship



E. Tugboat



F. Canoe

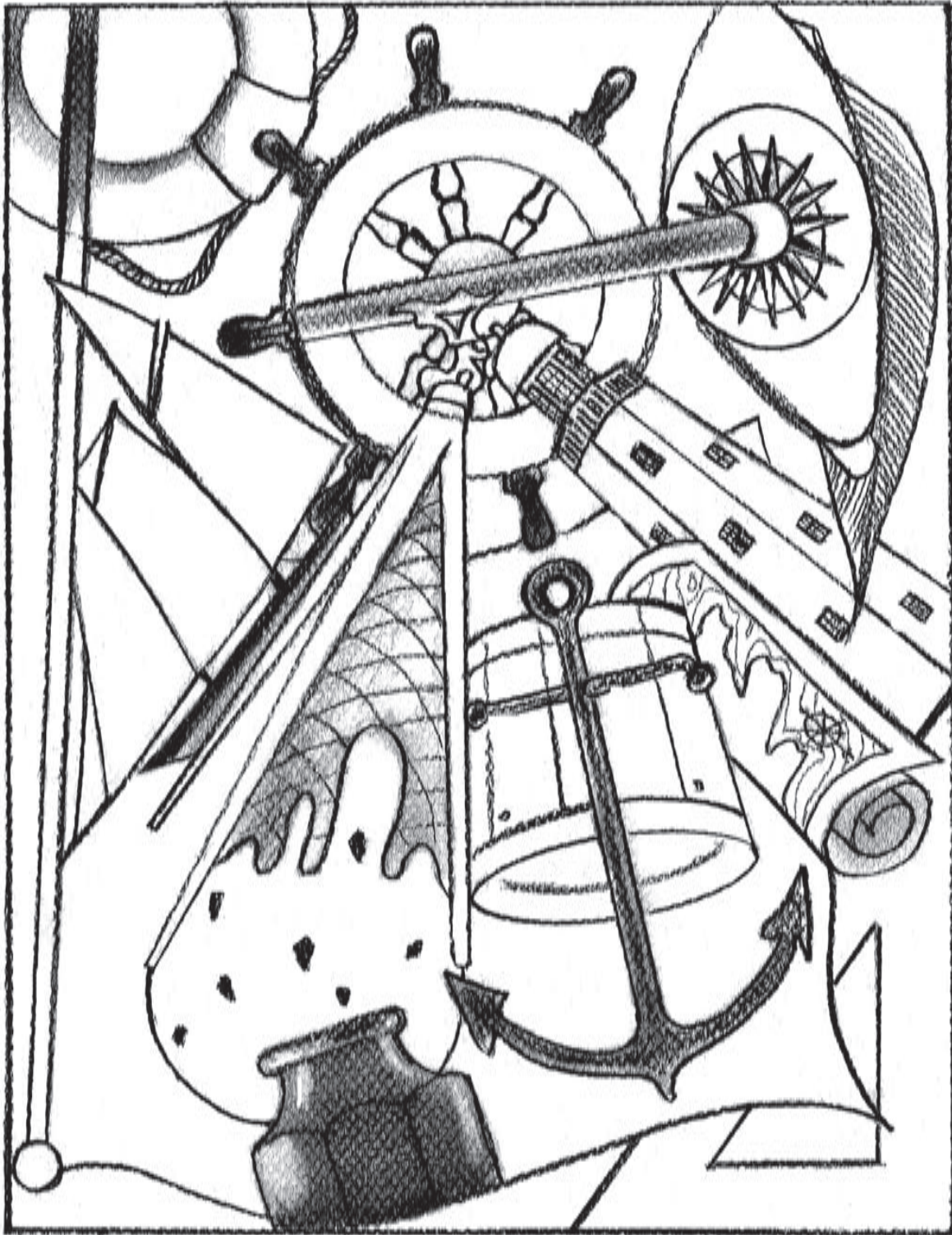


G. Liberty Ship



H. Sloop

Sloop: One-masted sailing ship.



ACTIVITY

**Can you find the telescope in this drawing?
What else can you find?**



MAINE HISTORICAL SOCIETY

ACTIVITY

Pretend you are working at the Observatory in 1846. Look at the telescope views on the opposite page. Using the key above them, draw the correct flag onto the flag pole.

KEY



Two Ships



Three Ships



Vessel at Anchor



Wreck



Design your flag any way you like.

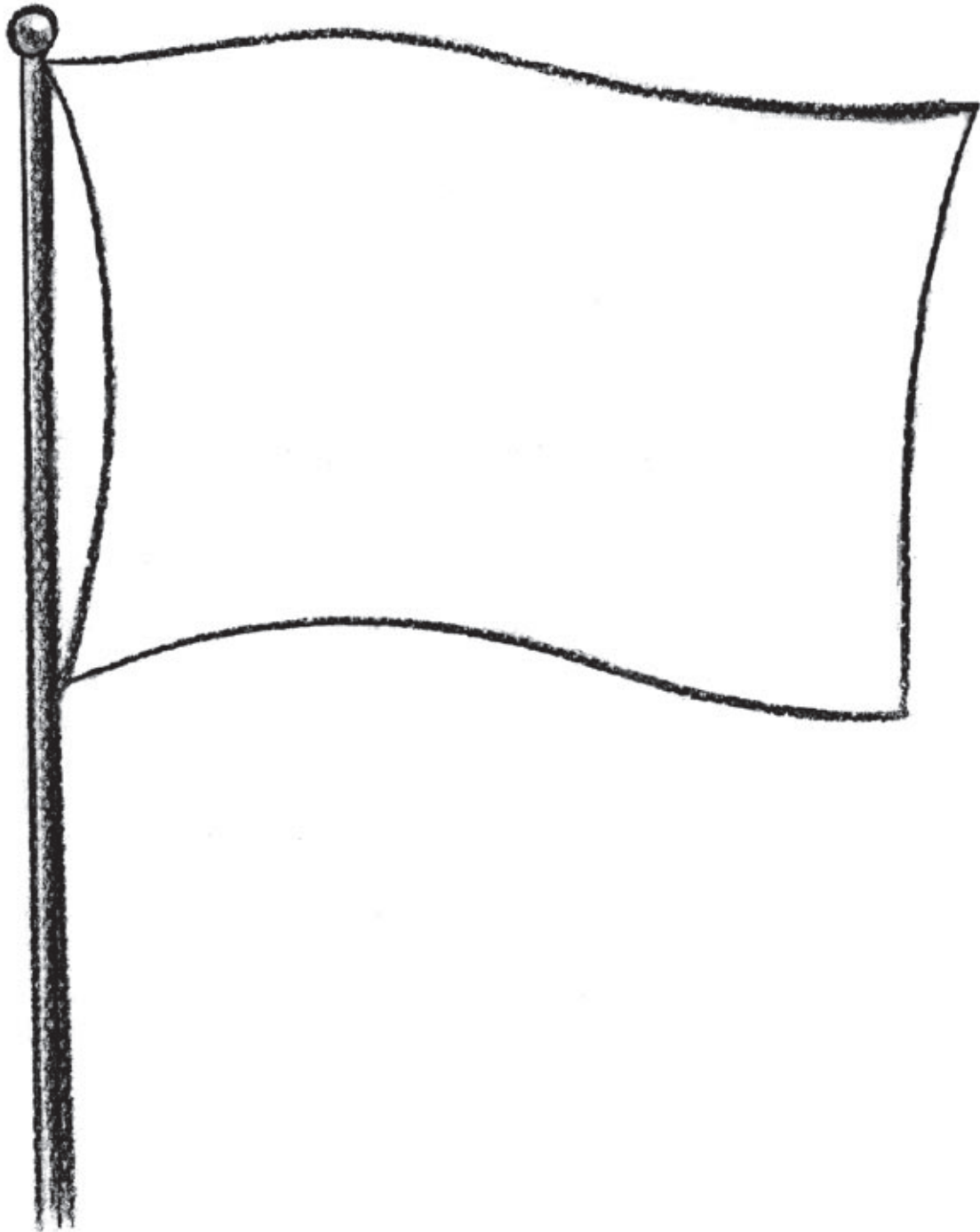
Pretend you owned a ship in Portland long ago.

How would you like your ship's flag to look?

ACTIVITY

Remember, your flag design should be original enough that people will recognize it as yours, but simple enough to be identified from a distance.

Make sure to use bright bold colors!



The Portland Observatory is similar in size and shape to a lighthouse, but it has a very different purpose.

- Look at the list of phrases at the bottom of the page.
- Decide whether the phrase describes the Observatory or the lighthouse.
- Then, check the box marked for the Observatory or for the lighthouse.



PORTLAND HEAD LIGHT, GREATER PORTLAND LANDMARKS



© TIMOTHY P. BYRNE

Lighthouse

- | | |
|--------------------------|-------------------------------------|
| <input type="checkbox"/> | Shines a light |
| <input type="checkbox"/> | Warns ships about rocks and ledges |
| <input type="checkbox"/> | Is on the shore |
| <input type="checkbox"/> | Is on land |
| <input type="checkbox"/> | Has a keeper who controls the light |
| <input type="checkbox"/> | Uses flags |
| <input type="checkbox"/> | Many remain |
| <input type="checkbox"/> | Only one remains |
| <input type="checkbox"/> | Has a telescope and compass rose |
| <input type="checkbox"/> | Has a keeper who signals ships |

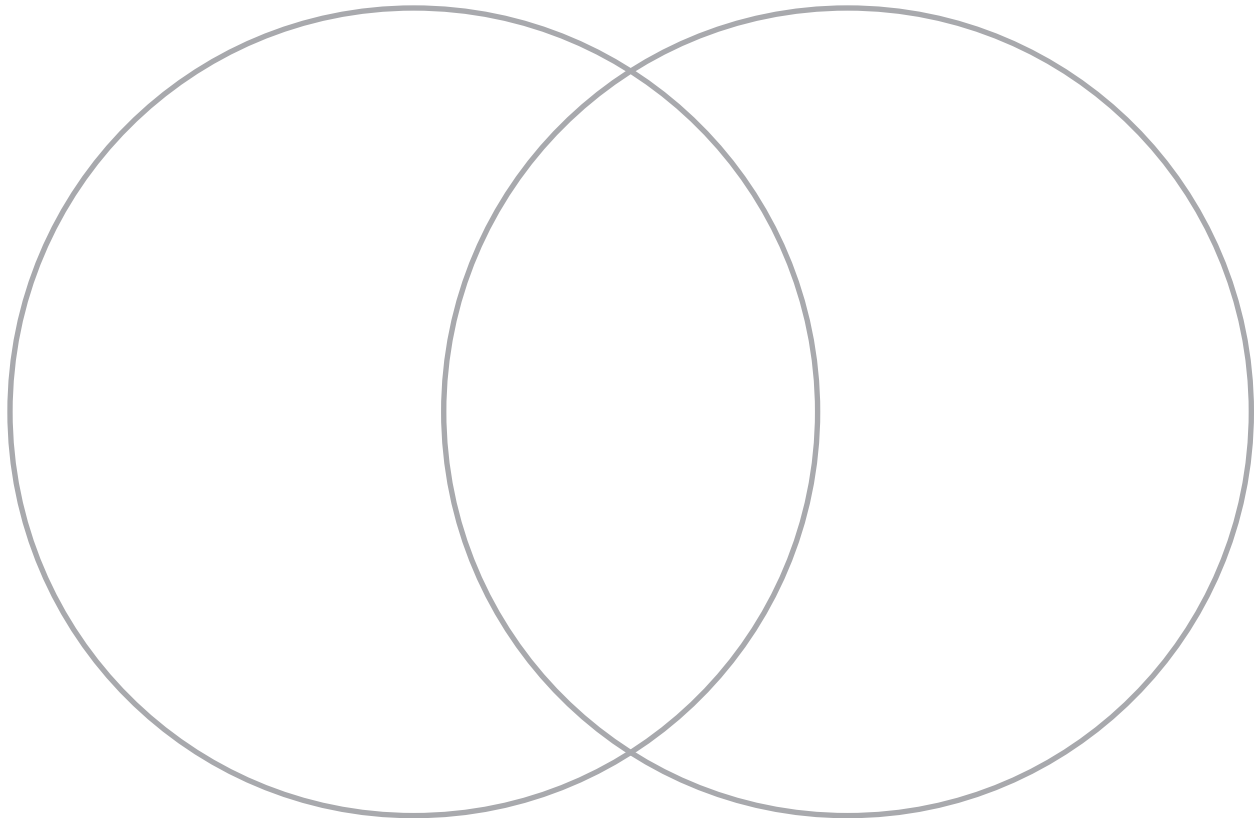
Observatory

- | |
|--------------------------|
| <input type="checkbox"/> |
| <input type="checkbox"/> |
| <input type="checkbox"/> |
| <input type="checkbox"/> |
| <input type="checkbox"/> |
| <input type="checkbox"/> |
| <input type="checkbox"/> |
| <input type="checkbox"/> |
| <input type="checkbox"/> |
| <input type="checkbox"/> |

What do you think life was like for Lemuel Moody, living in Portland so long ago? Now think about your own life. What are the differences between you? What do you have in common?

Look at this diagram.

- Put some words that describe you in your circle.
- Put some words that describe Lemuel in his circle.
- Put the words that describe what you have in common in the space where the circles overlap.



Lemuel Moody

YOUR NAME

What did you find out about your differences and similarities?

The Great Fire

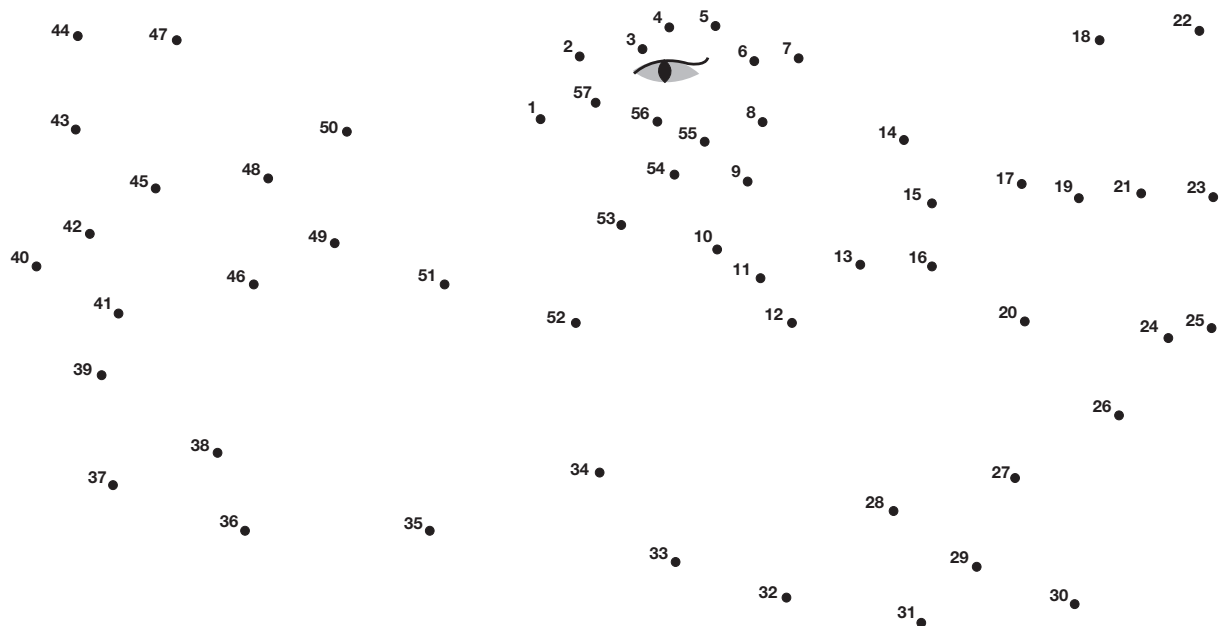
The Portland Observatory has been around since 1807. Back in the year 1866, though, it was almost ruined by the Great Fire. On the Fourth of July, children were lighting firecrackers on Commercial Street when a fire started. It spread quickly through town and up Munjoy Hill.

Captain Moody's son Enoch told everyone to carry buckets of water up the stairs of the Observatory and pour the water out the windows! They kept the tower damp so that the flames couldn't destroy it. Even so, many of the shingles on the outside turned black because of the smoke.

Portland has had many destructive fires. The city burned twice in the 1600s, once in 1775, and then again in 1866.

ACTIVITY

Now, connect the dots below and see what you create.



Do you know what kind of animal this is? That's right – a phoenix! Why is it a good symbol for the city of Portland? Next time you are walking around Portland, see if you can spot a phoenix – either carved onto a building, over a doorway arch, or even on the city flag.

Phoenix: A legendary bird that burns and rises again from the ashes.

The End of Signaling

By 1923, the two-way radio had been invented. With radios for talking back and forth, people no longer needed flags to understand which ships were coming. The Observatory closed down. Eventually, Captain Moody's **descendants** gave the building to the City of Portland, and the City promised to take care of the old wooden building. During the Great Depression of the 1930s, a group of workers hired by the U.S. government called the Works Progress Administration **restored** the Observatory. With a grand celebration on Flag Day in 1939, the Portland Observatory was open once again – but this time as a museum.

ACTIVITY

Why do you think it was important to make the tower into a museum?

CONSTRUCTION CREW AT THE OBSERVATORY, 1939, CAROL MALIA



FROM "THE OBSERVATORY" BY JAMES PHINNEY BAXTER, 1893, GREATER PORTLAND LANDMARKS

Descendant: A present family member of someone who lived long ago.

Restore: To bring back to its original condition: restore a building.

Another Danger

Thousands of people have enjoyed visiting the Observatory as a museum and climbing all 103 steps to the top. During World War II, the tower was closed to the public and used again as a lookout, but this time for enemy planes. In the 1980s, Greater Portland Landmarks started running the Observatory. Everything was fine until workers discovered that **powder post beetles** were eating the wooden beams.

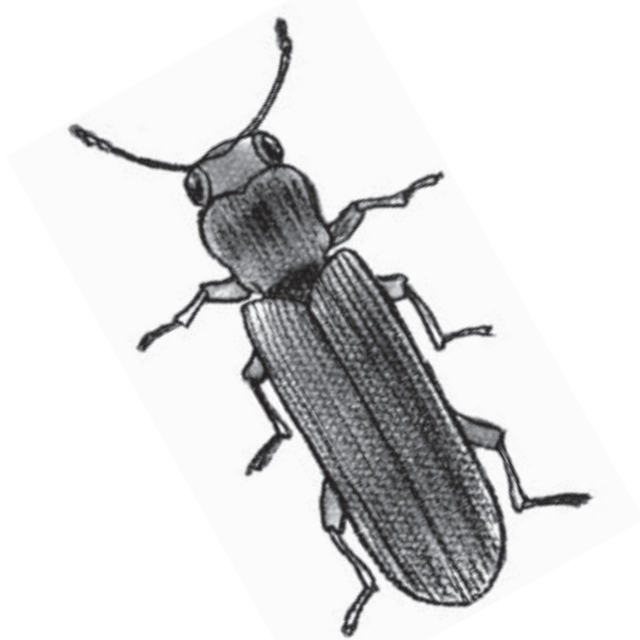
The Observatory was closed in 1994 for a second major restoration.



CONSTRUCTION CREW AT THE OBSERVATORY, 2000 © TIMOTHY P. BYRNE



OBSERVATORY RESTORATION, 1998 ©TIMOTHY P. BYRNE

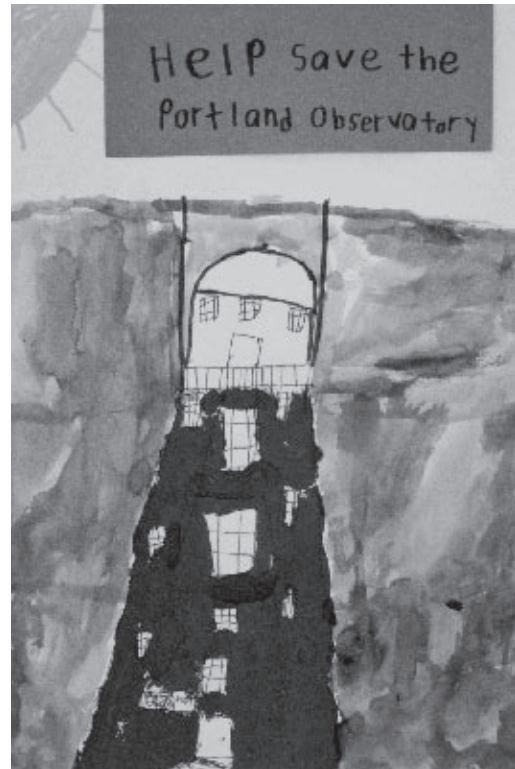


Powder post beetle: Beetles (about 1/8 inch long) that eat soft woods (pine, spruce, fir) and hardwoods (oak, maple), and make small, round holes in the wood.

Kids Save the Day!

With the help of the City of Portland and the entire community, Greater Portland Landmarks restored the famous tower. Young people helped, too. Local third-graders, known as “KidsPort,” raised \$5,000 (the original price to build the tower in 1807!). Since the Portland Observatory is the last historic maritime signal tower in the whole country, it was important for people to become **stewards** of this incredible structure and to preserve it for generations to enjoy.

Today, the Observatory is again open as a museum. Each year, hundreds of students come to learn about Captain Moody and to climb the stairs for the best view in Portland.



GREATER PORTLAND LANDMARKS



“KIDSPORT” HELPS FUND THE RESTORATION
GREATER PORTLAND LANDMARKS

During the summer, visitors from all fifty states and many different countries do the same. With continued stewardship and support, the Portland Observatory will stand over Portland Harbor for centuries to come.

Steward: Someone who helps care for buildings or the land.

PORTLAND **TIMELINE**

1775 British bombardment of Portland (then called Falmouth)

1786 Falmouth becomes Portland

1786 Wadsworth-Longfellow House completed

1807 Future poet Henry Wadsworth Longfellow born

1820 Maine becomes a state; Portland is the capital until 1831

1851 Commercial Street created to connect railroads in Portland

1858 Construction of Morse-Libby House (Victoria Mansion) begins

1859 Construction of Fort Gorges



BURNING OF FALMOUTH, 1775, MAINE HISTORICAL SOCIETY



VIEW OF MUNJOY HILL AFTER THE GREAT FIRE, MAINE HISTORICAL SOCIETY

OBSERVATORY **TIMELINE**

1767 Lemuel Moody is born

1780 Lemuel Moody joins the Navy

1807 Observatory is constructed

1813 Boxer and Enterprise battle off the coast of Maine

1817 President Monroe watches Fourth of July fireworks from the top of the Observatory

1846 International code of signal flags is published

1846 Lemuel Moody dies of old age, son Enoch carries on signaling

1866 Great Fire of 1866 destroys much of Portland; the Observatory is saved

1923 Observatory stops signaling the arrival of vessels

1937 Moody descendants give the Observatory to the City of Portland

1939 Observatory restored by the Works Progress Administration

1866 Great Fire destroys 1/3 of city;
10,000 homeless

1899 First automobile arrives
in Portland

1912 City Hall completed

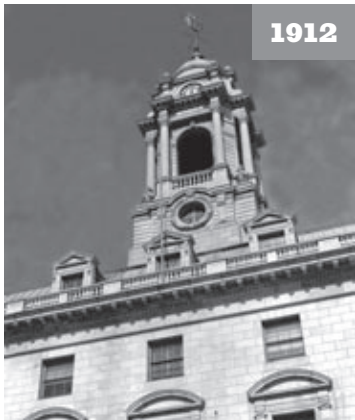
1914-16 Million Dollar
Bridge constructed

1940-45 236 Liberty Ships built
in Portland Harbor

1961 Union Station demolished

1964 Greater Portland Landmarks
founded

1990 City of Portland adopts an historic
preservation ordinance;
strengthens it in 2004.



PORTLAND CITY HALL,
NICHOLAS DEAN



WWII PLANE SPOTTING AT THE OBSERVATORY,
PORTLAND PRESS HERALD



UNION STATION DEMOLITION



PORTLAND OBSERVATORY
REOPENS, BILL HALL

1940-45 Observatory closed to the
public during World War II as
Civilian Defense uses tower to
spot planes and vessels

1972 Observatory is listed on
National Register of Historic Places

1982 Greater Portland Landmarks
manages education at the
Observatory

1994 Discovery of powder post beetles

2000 Reopening celebration
on Flag Day, June 14th

2005 Visitors from all 50 states and
more than 30 countries tour
the Observatory

2006 Observatory becomes a National
Historic Landmark

Word Quiz: Fill in the Blanks

Fill in the blanks below using some words you already know and some of these words you've learned throughout this book.

- landmarks wharves water boy telescope lantern
 descendants Lemuel Moody signal entrepreneur
 phoenix Fire restoration ballast flags beetles
 1807 5 8 86 103 radio

The Portland Observatory was built in _____ to serve as a maritime _____ tower. With _____ sides and a height of _____ feet, the Observatory is one of Portland's most famous _____.

When he was a boy, _____ went to sea as a ship's _____. He became a sea captain, and sailed all over the world.

When Lemuel came back to Portland, he became an _____ by starting a business. He built the Observatory on a hill overlooking the harbor, and used a _____ to watch for approaching ships.

Ship owners paid Captain Moody _____ dollars a year to raise _____ when their ships were arriving. That made it easier to load and unload their cargo on the waterfront's many _____.

The Observatory is held down by 122 tons of stone that act like the _____ in a ship. You can see the rocks under the trap door!

The Portland Observatory was almost ruined by the Great _____ of 1866. Not long after this event, the symbol of the City of Portland became the _____.

By 1923, two-way _____ had been invented, and ships could call ahead to announce their arrival. Ship owners did not need the Observatory's flags any more. Soon after, Captain Moody's _____ gave the tower to the City of Portland.

The Observatory became a museum for everyone to enjoy. In the 1990s, the Observatory was again in danger because of powder-post _____.

For five years the building was closed for a major _____ project. Now, from the spring through the fall, thousands of visitors come from all over the world to climb the _____ steps, stand outside on the _____ deck and enjoy the spectacular views that Captain Moody enjoyed long ago.

THE PORTLAND OBSERVATORY A TRUE LANDMARK!

Today the Observatory still flies special flags to signal ships,
such as cruise ships in the summer and fall,
and reminds us of Portland's wonderful history.
We know you will enjoy your visit to the Observatory!



BILL HALL

Sides: 8

Stories: 7

Height: 86 feet

Height above Sea Level: 227 feet

**Tons of ballast weighing
the building down: 122**

Number of windows: 36

Number of flagpoles today: 3

Number of steps: 103

Year constructed: 1807



Since 1807, the Observatory has offered spectacular views of Portland's busy harbor and served as a beloved symbol of the city's rich maritime heritage. Named a National Historic Landmark in 2006, the Observatory is the only known remaining historic maritime signal tower in the United States.



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