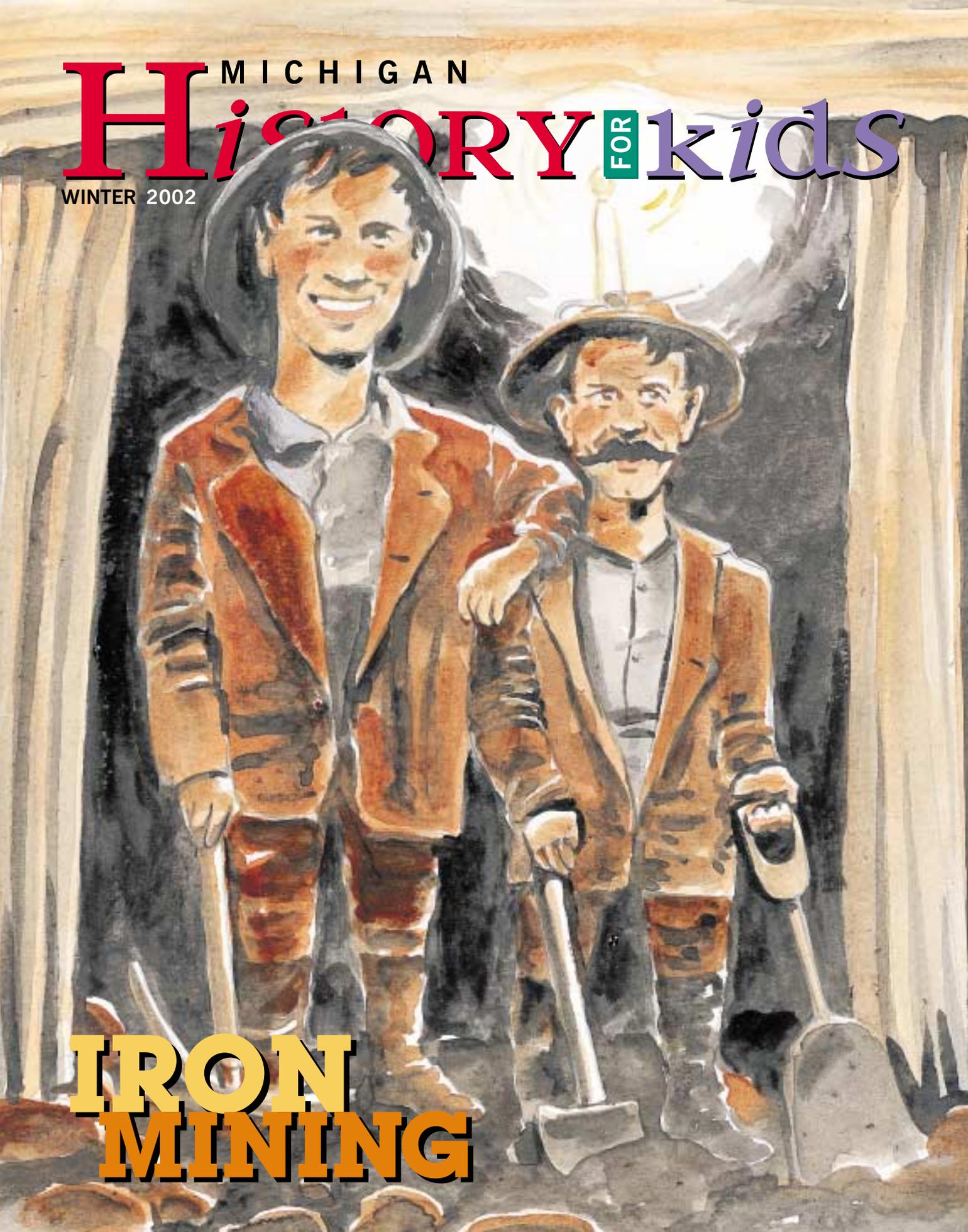


MICHIGAN
HISTORY **FOR** kids

WINTER 2002



**IRON
MINING**

What's

INSIDE...

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What is a *vihta*?
To find out,
turn to page 15.

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THE EDITOR SAYS...



Miners like these two men at the Pewabic Mine near Iron Mountain on the Menominee Range used candles, black blasting powder, and picks to dig the ore from the earth. In this issue you will learn about iron mining, which began in Michigan during the 1840s and continues to this very day. Illustration by Patrick Reed from a photo at the Menominee Range Museum.

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www.michiganhistorymagazine.com

Ask the Professor

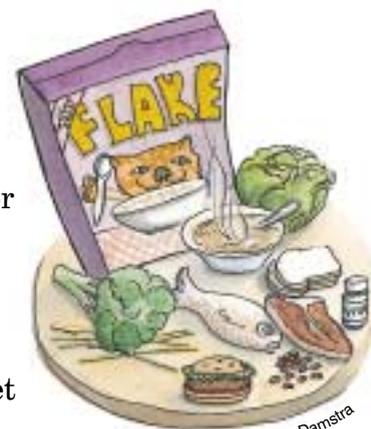


Is it true I **NEED** iron in my **BODY?**

—KIRK from FOWLER

you should. Eating foods containing iron can prevent these problems. Good iron sources are meat and fish (beef, lamb, pork, and poultry), dried fruits, green vegetables like spinach and lettuce, beans, peas, sweet potatoes, pumpkin, whole-grain bread, and cereal with iron added to it.

YES. Your body stores iron in your liver, spleen, and bone marrow. Iron helps your body make hemoglobin, the substance in your blood that moves oxygen from your lungs to body parts that need it. If you don't have enough iron, your brain and body won't get enough oxygen. You might get tired or sick easily and you won't grow as big as



Carolyn Damstra

In The NEWS



Hillary Whitcomb Jesse

Steel cans and many car parts are recycled every year in Michigan.

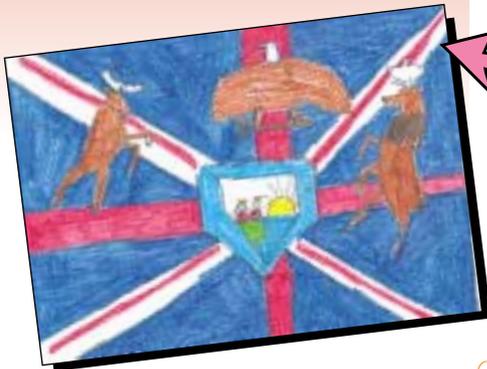
ON OCTOBER 2, 2002, the Livonia Engine Plant, a General Motors engine factory in Wayne County, was named a Michigan Clean Corporate Citizen. The recognition came through a state program that encourages companies to be environmentally responsible. Workers at the plant recycle all waste metal chips and engine parts, and reduce the amount of trash they create.

In 2000, almost 14 million vehicles with many steel parts were recycled in the U.S. The same year, the recycling industry remelted more than 18 billion steel cans for reuse. "Tin" cans that hold soup, fruit, pet food, and paint are not tin, they are steel with a tin coating. Recycling steel and iron products, like cars and cans, saves natural resources and energy. Companies do not have to mine new iron ore or limestone or burn more fuel to smelt the iron. Many Michigan cities and townships encourage recycling. Some cities pick up recyclables at the curb on trash pickup day. Elsewhere, families take their steel cans and other recyclable items to drop-off centers.

**In the last issue
we asked you...**

What would
Michigan be
like if the British
ruled today?

WHAT DO YOU THINK?

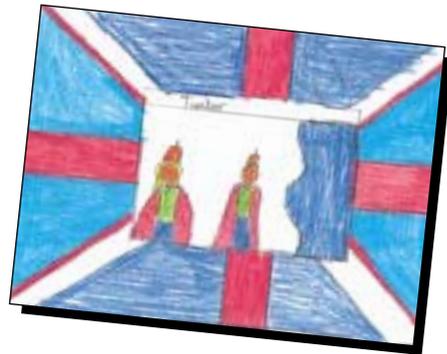


“I think
Michigan's flag
would look
differently if the
British ruled Michigan. It would
have a king and a queen instead
of a voyageur.”

—DELARAH from
SCOTTVILLE

“I drew a king and a queen
in the middle of the Tuebor.
There would be a British flag in
the background.”

—AMY from SCOTTVILLE



**TELL
US!**

**Draw something you
or your parents use
that has iron in it.**

Send your stories and pictures to:

Michigan History for Kids
Attn: What Do You Think?
Michigan Historical Center
P.O. Box 30741
702 W. Kalamazoo Street
Lansing, MI 48909-8241
or e-mail:
williewolverine@michigan.gov

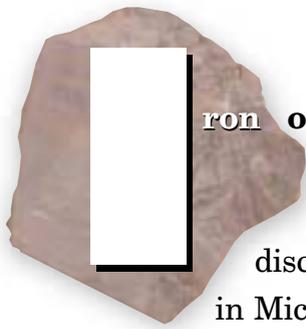


“If the British ruled
Michigan today it wouldn't
be like it is today. I bet
we would still have
some wars.”

—KAYLA from SCOTTVILLE

Check out our Web page for more submissions

www.michiganhistorymagazine.com



iron ore was first discovered

in Michigan's Upper

Peninsula by William Austin

Burt and his surveying crew on

September 19, 1844, near present-day Negaunee.

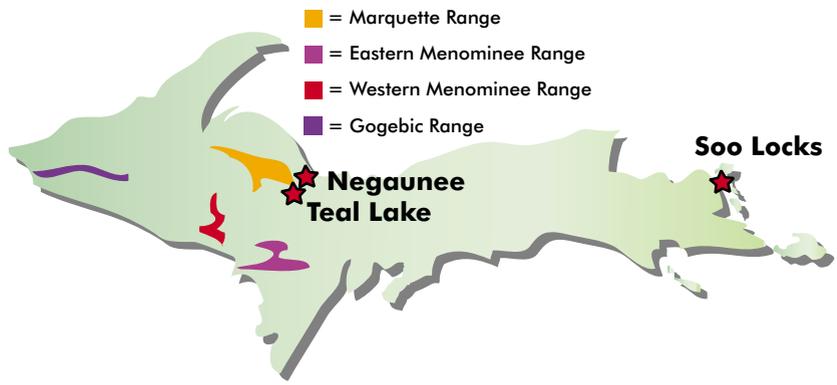
Within a few years, iron mines were opening all across the central Upper Peninsula. The first mine was the Jackson Mine near the present-day city of Negaunee. Early mines faced an unfriendly environment and transportation problems. When the Soo Locks opened at Sault Ste. Marie in 1855, shipping iron ore became much easier.

The iron mines were located in areas known as ranges. The Upper Peninsula's biggest range was called Marquette. Two smaller ranges were known as Menominee and Gogebic.

Michigan produced more iron ore than any other state until the 1890s. Although production continued to increase, the state fell from first place because bigger mines opened elsewhere in the country.

Iron mining attracted many immigrants to the Upper Peninsula, especially the

iron ore
rock or mineral from which iron can be mined



Cornish, Irish, Swedes, and Finns. They settled in communities near the mines.

cosmopolitan
made up of people from many parts of the world

According to one observer, "the visitor to this mining country finds it the most **cosmopolitan** society he has ever entered."

Mining was dirty and often dangerous work. The state's worst mining disaster occurred on November 3, 1926, when the Barnes-Hecker Mine near Ishpeming suddenly flooded.

Working hundreds of feet beneath the surface of the earth, 51 miners were trapped and died that day.

All the mines on the Menominee and Gogebic Ranges are now closed.

Yet, iron mining remains important in Michigan. Two mines on the Marquette Range—the Empire and Tilden—produce about one-quarter of the

nation's iron ore. ■

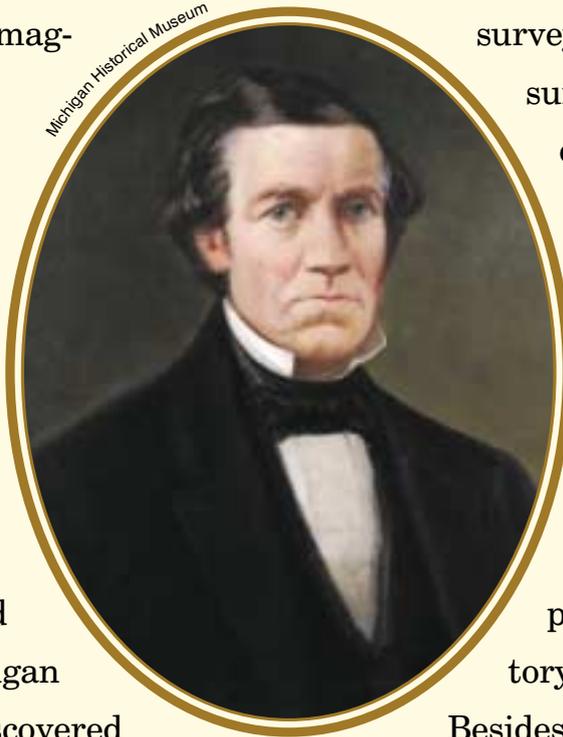


On September 19, 1844,
near Teal Lake in
Marquette County,
William Austin

Burt watched as the mag-
netic needle of his
surveying compass
danced crazily. Burt
told the men with
him, “Look around
and see what you
can find.”

What they found
was iron ore.

At age 52, Burt had
been surveying Michigan
for years when he discovered
iron ore. Born in 1792 near Boston,
Massachusetts, Burt moved to New
York State before settling in Michigan
in 1824.



Impressed that George Washington
and Thomas Jefferson had been survey-
ors, Burt wanted to be a surveyor. In
1833 he was appointed a U.S. deputy
surveyor. Burt and his crew

surveyed much of Michigan
during the
1830s and
1840s.

Burt
was a care-
ful surveyor.
According to the U.S.
surveyor general, Burt
produced “the most satisfac-
tory” work he had ever seen.

Besides discovering the iron ore
that became part of the Marquette
Range, Burt and his crew also discov-
ered the iron ore that became the
Menominee Range.

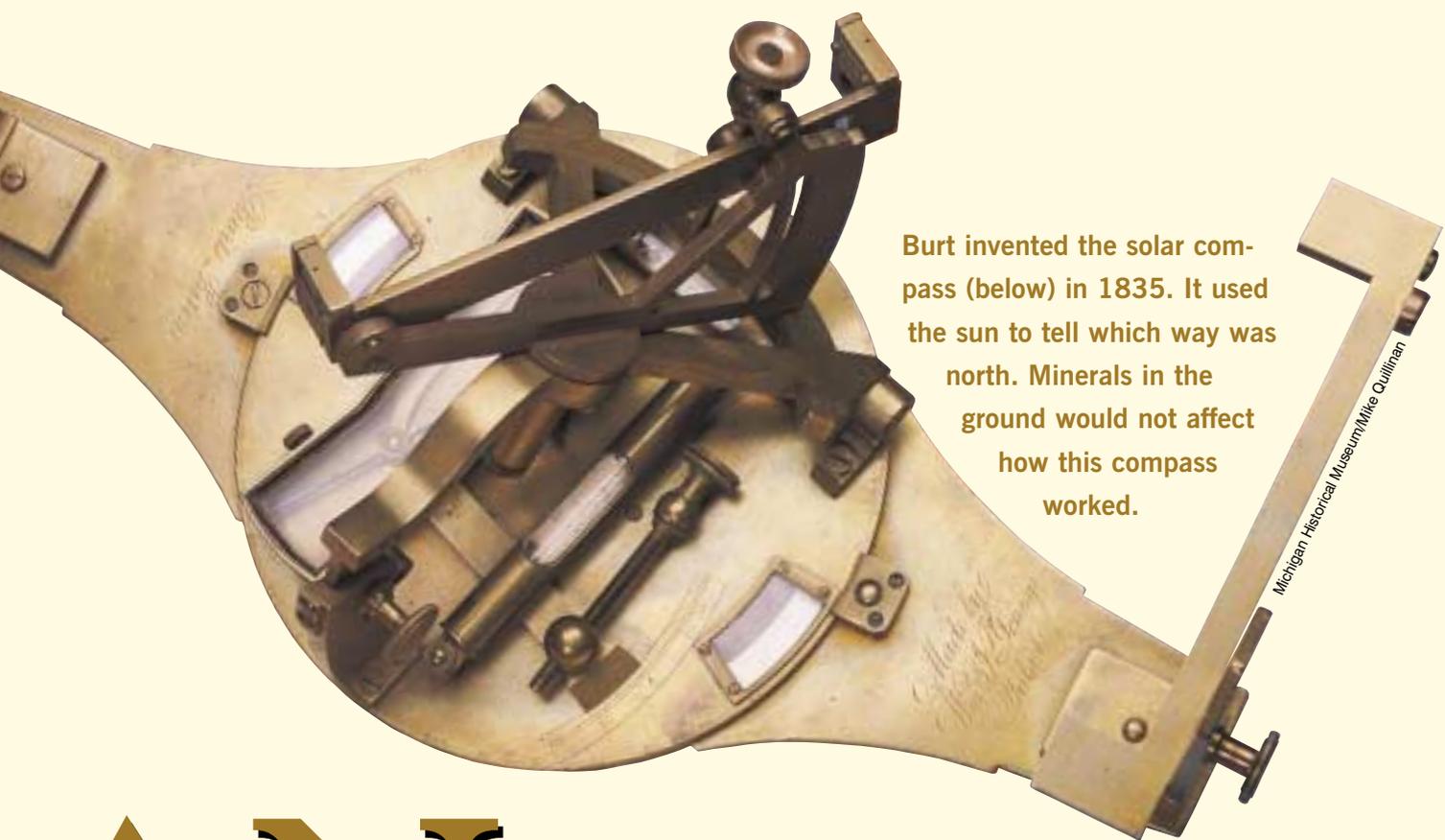


MICHIGAN'S IRON M

Burt was more than a surveyor. He invented a solar compass that allowed surveyors to work in areas where minerals in the ground might make the needles of their magnetic compasses act wildly and produce errors. Burt's solar compass saved the U.S. government lots of money when the country's western

territories were surveyed.

When Burt was a young man he hoped that he would use his abilities to do something good for mankind. Given his accurate surveys, his solar compass, and the industry that grew out of his discovery of iron ore, he accomplished that goal. ■



Burt invented the solar compass (below) in 1835. It used the sun to tell which way was north. Minerals in the ground would not affect how this compass worked.

AN

Why

IRON ORE

Iron ore mined in Michigan's Upper Peninsula is made into iron and steel. They have changed the way Americans live.

From large locomotives to guitar strings, and from automobiles to the weapons used to preserve our freedom, Michigan's iron ore has helped build modern America.

During the Civil War, Michigan iron was used in weapons, machinery, and tools. It also built factories, railroads, and ironclad warships that helped preserve the Union.

Michigan iron ore fueled America's Industrial Revolution. It built factories and machinery and furnished the raw material to make other products.

The ore was used in cities, skyscrapers, heating plants, water and sewer lines, railroads, bridges, and tunnels.

It provided iron and steel used in shipbuilding and in the manufacture of farm equipment.

Iron from the ore was used in Michigan's auto industry that put America on wheels.

Iron helped make Michigan the Arsenal of Democracy during World War II by constructing tanks, trucks, and boats.

Iron ore mining built Upper Peninsula communities, supported their economies and attracted many immigrants who enriched Michigan's culture.

The proud immigrant mining experience is still present in towns like Iron Mountain, Ironwood, and Ishpeming.

In communities like these and others, people's names, foods, celebrations, and traditions remain proof of the men who worked the mines and the women and children who supported their efforts.

Today, more than 150 years after iron ore was discovered in the central Upper Peninsula, two mines on the Marquette Range produce about one-quarter of America's iron ore supply. ■



is Important!



Iron ore is part of our lives today, too. The objects in this ore-carrying mine car (called a skip) are all made of iron. Even the tracks underneath the skip are iron.

Michigan Historical Museum/Mike Quillinan

POWDER TO

PELLETS

After World War II ended in 1945, American officials feared that the United States might run out of high-grade iron ore.

There was iron ore in other countries, but American officials did not want to depend on those sources.

President Harry Truman challenged the American iron ore industry to find a solution to the possible future shortage.

The solution was iron ore pellets.

Iron ore pellets are made from taconite, a low-grade iron ore. When the taconite is separated from waste rock (called siliceous waste), it is like baby powder. It cannot be shipped that form. After experimenting by mixing taconite with water and clay, then forming it into balls in large drums, the industry created iron ore, or taconite pellets.

Today, almost all American iron ore used to make steel in this country is in the form of pellets. ■



Cleveland Cliffs

This aerial view shows the Tilden Mine in Ishpeming. Iron ore pellets, shown here actual size, are made at the mine.

