

IMAGINATIVE INVENTIONS



by

CHARISE
MERICLE
HARPER



Have you ever wondered how
chewing gum was
invented? Or



who made the
first roller skates?



Or why most banks are
shaped like pigs and not
other animals?



All of these (and
more!) are explained in this
wacky, witty, and informa-
tive book. Find out the most
popular potato-chip flavor,
how fast the fastest back-
ward roller skater can skate,
and how much money you'd
have today if you had saved a
penny for every day of your
life. You just might be
inspired to create a few
imaginative inventions of
your own.



Classroom Book Wish

Mrs. Hornsberger

A Gift For

Maggie Burr

From

Scholastic Book Fairs

IMAGINATIVE INVENTIONS



The Who, What, Where, When, and Why
of Roller Skates, Potato Chips, Marbles, and Pie



by Charise Mericle Harper

Megan Tingley Books



Little, Brown and Company
Boston New York London

For Papa (French for Dad),
who whistles while he makes things



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First Edition

Though all the facts have been verified to the best of the author's ability, it should be noted that creative storytelling and imagination were also used to tell these tales.

The author would like to thank the following for their research information:

Panati's Extraordinary Origins of Everyday Things, by Charles Panati, 1987, Harper & Row; *Guinness World Records 2000 Millennium Edition*, edited by Nic Kynaston, 2000, Bantam Books; *Do Fish Drink Water?: Puzzling and Improbable Questions and Answers*, by Bill McLain, 1999, William Morrow and Company; *Girls Think of Everything: Stories of Ingenious Inventions by Women*, by Catherine Thimmesh, 2000, Houghton Mifflin Company; www.designershoes.com/about_footwear.htm (a site about shoes); www.nabisco.com (animal cookies); web.mit.edu/invent/index.html (a great site about inventors); www.wrigley.com (about gum); www.hometown.aol.com/rkaczur/history.htm (history of gum); www.nacgm.org/consumer/funfacts.html (fun facts about gum); home.nycap.rr.com/useless/ (a great site about useless information); www.elliskaiser.com/doughnuts (about doughnuts); www.rollerskatingmuseum.com (facts about roller skating); www.blocksite.com/reference/faq.htm#history (about marbles); www.earthdaybags.org (site devoted to the Earth Day Project); www.wham-o.com (Frisbee site); www.piecouncil.org (about pie)

Library of Congress Cataloging-in-Publication data

Harper, Charise Mericle.

Imaginative inventions : the who, what, where, when and why of roller skates, potato chips, marbles, and pie (and more!) / by Charise Mericle Harper. — 1st ed.

p. cm.

ISBN 0-316-34725-6

1. Inventions — History — Juvenile literature. [1. Inventions — History.] I. Title.

T15.H344 2001

609 — dc21

00-062443

10 9 8 7 6 5 4 3 2 1

TWP

Printed in Singapore

The illustrations for this book were created on chipboard using acrylic paint, wire, pencil, and collage.

The text was set in Birdlegs, and the display type was handlettered by the artist.

How are inventions made?
Is it really hard to do?
To think of something people need
that's different and brand-new?

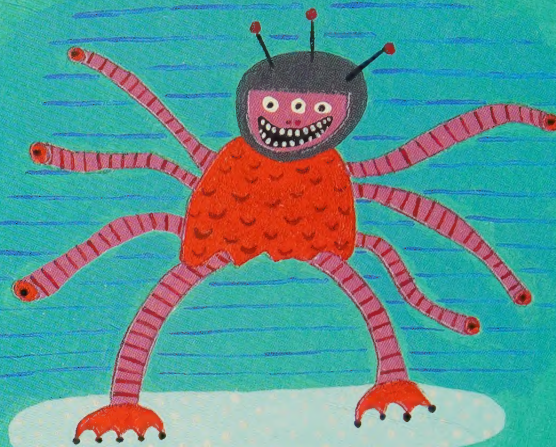


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FRISBEE®

In 1957
flying saucers were his passion.
Walter dreamed of men from space
and what they'd wear as fashion.



He made a little disc of tin
and threw it in the air.
And from far away it looked as if
a UFO was there.

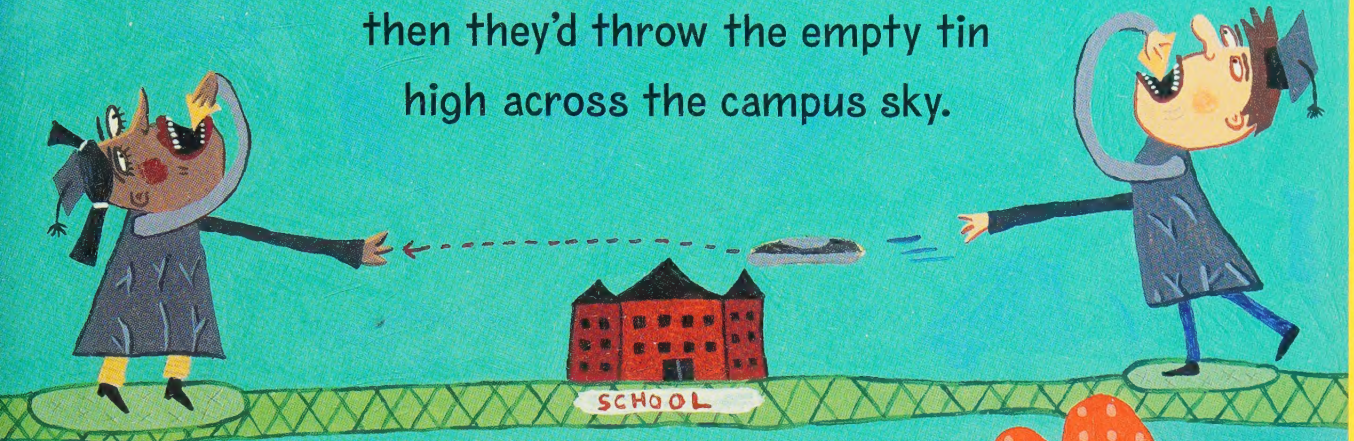
UNIDENTIFIED
FLYING
OBJECT

He thought he was the first
to think of such a game.
But others had invented it
and given it a name.

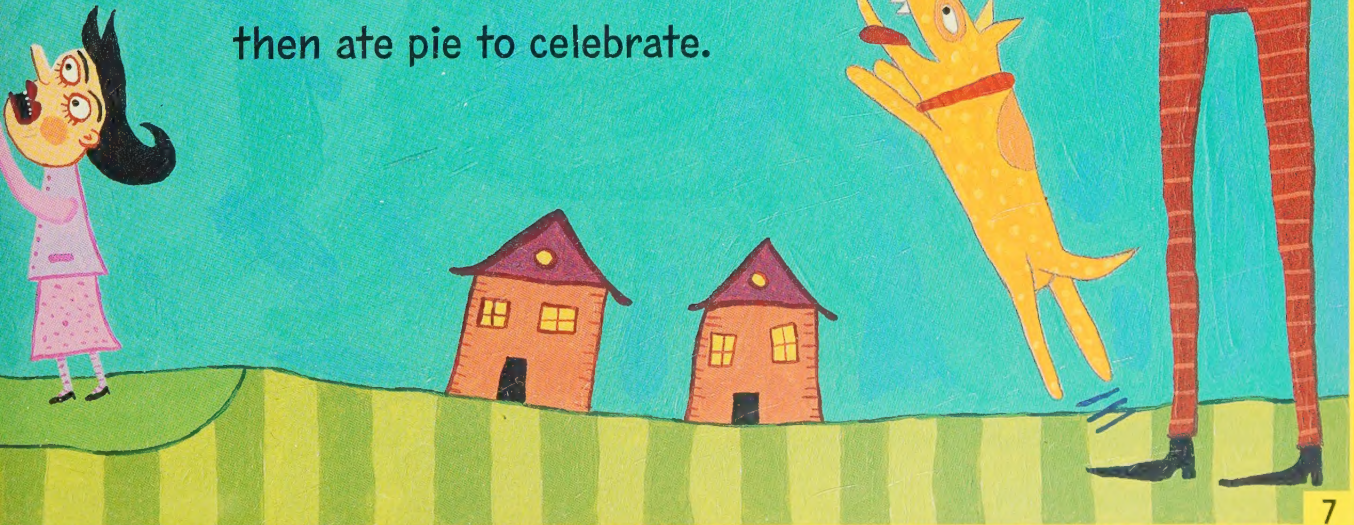




Students at a school called Yale
would eat a Frisbie Pie,
then they'd throw the empty tin
high across the campus sky.



Walter heard of the Frisbie tins and said,
“That name is great!”
So he called his toy a Frisbee
then ate pie to celebrate.



There is a special
Frisbee made just for
dog competitions.

More Frisbees are sold every
year than footballs, baseballs,
and basketballs combined.

The longest distance a
Frisbee flying disc has
been thrown is 6933 feet.

Who: Walter Frederick
Morrison
Where: California
When: around 1957





In Greece there was a baker
1,600 years ago
who said, "I'll make a stew,
and then cover it with dough."

It's said the world's first pie
was probably made of meat
and it wasn't until later
that a pie became a sweet.





BLUEBERRY

CHERRY

BANANA

Today we have so many kinds
like pumpkin, lime, or cherry.
Your favorite flavor — is it peach?
Or rhubarb with strawberry?

STRAWBERRY

CHOCOLATE

LEMON

APPLE

LIME

PEACH

PECAN

PUMPKIN

PEAR



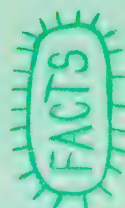
Who: unknown
Where: Greece
When: 5th century

Apple is the most popular flavor
in North America, except at
Thanksgiving, when the most
popular flavor is pumpkin.

The state of Illinois
produces the most
pumpkins for
pumpkin pie.

The largest pecan pie
ever made was 40
feet in diameter.

Cream pies are the
pie of choice for
throwing.



PIGGY BANK

In the Middle Ages
pots were made from pygg.

It was an orange clay
that wasn't hard to dig.



When someone had some money
to save or hide away,
they kept it in their pygg jar
for a future rainy day.





Some potter probably said,
after giving it some thought,
“What if I take my fine pygg clay
and make a pig-shaped pot?”

$$\begin{array}{r} 5\text{¢} \\ + 5\text{¢} \\ \hline 10\text{¢} \end{array}$$

Well, soon the other potters
who formed and shaped the clay
were making jars in piggy shapes
just like they do today.



Who: unknown Where: England
When: pyggy used to make pots.
Middle Ages: first pig-shaped
pot created in 18th century

If you saved one penny
for every day you were
alive, you'd have:

1 year old	— \$3.65
2 years old	— \$7.30
3 years old	— \$10.95
4 years old	— \$14.60
5 years old	— \$18.25
6 years old	— \$21.90
7 years old	— \$25.55
8 years old	— \$29.20

The largest
pyggy bank
collection has
4,175 pigs in it.



EYEGLASSES



Silvano couldn't see that well,
although he wasn't blind.
He had a lot of trouble
finding things not hard to find.

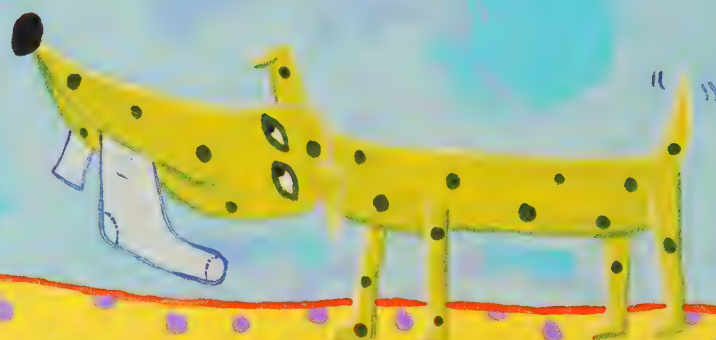


He lost his pants, his socks, his shirt —
he even lost his dog.

He said, "I've got to fix my eyes
and clear away this fog."



One day in the year 1280
while drinking from a glass,
he was looking through the bottom
when he said, "I see at last."

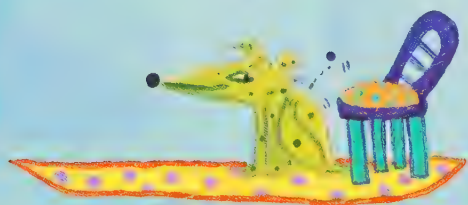




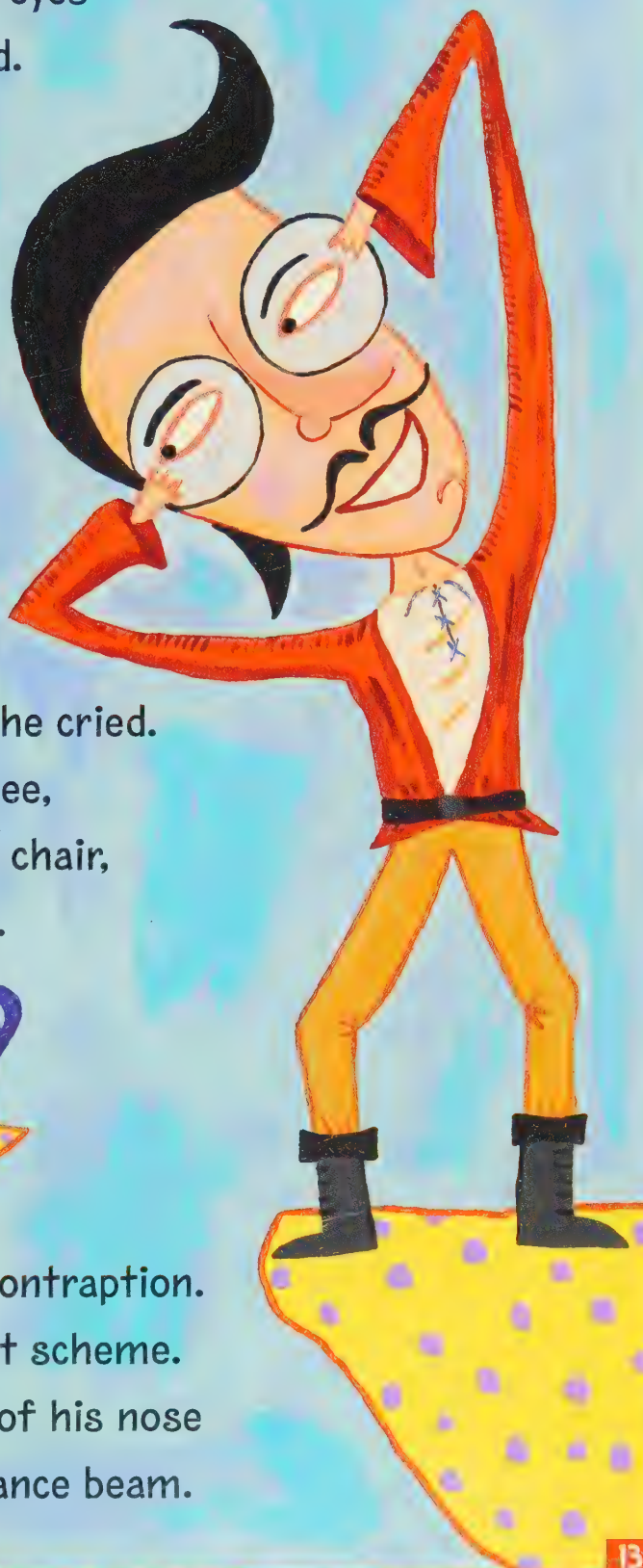
So he made two discs of finest glass.
He made them thick and round.
He held them right up to his eyes
and this is what he found.



“My pants, my socks, my shirt!” he cried.
His heart was filled with glee,
and there right by his favorite chair,
his dog scratching a flea.



He made a fine contraption.
It was a brilliant scheme.
He used the top of his nose
as a glasses balance beam.

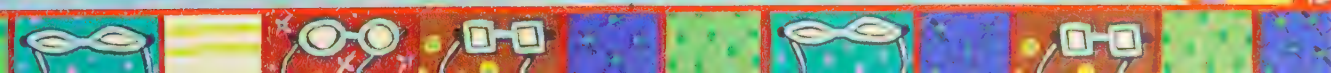
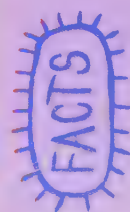


The first glasses were
much heavier and often
caused headaches or sore
noses if worn for too long.

Arms for glasses to fit over your ears were
invented 400 years after glasses. Until then peo-
ple tried to balance the glasses on their nose or
used leather straps to tie them to their head.

Seventy percent of
all people in the
U.S. wear glasses
or contact lenses.

Who: thought to be
Silvano Armato
Where: Pisa, Italy
When: 1280s

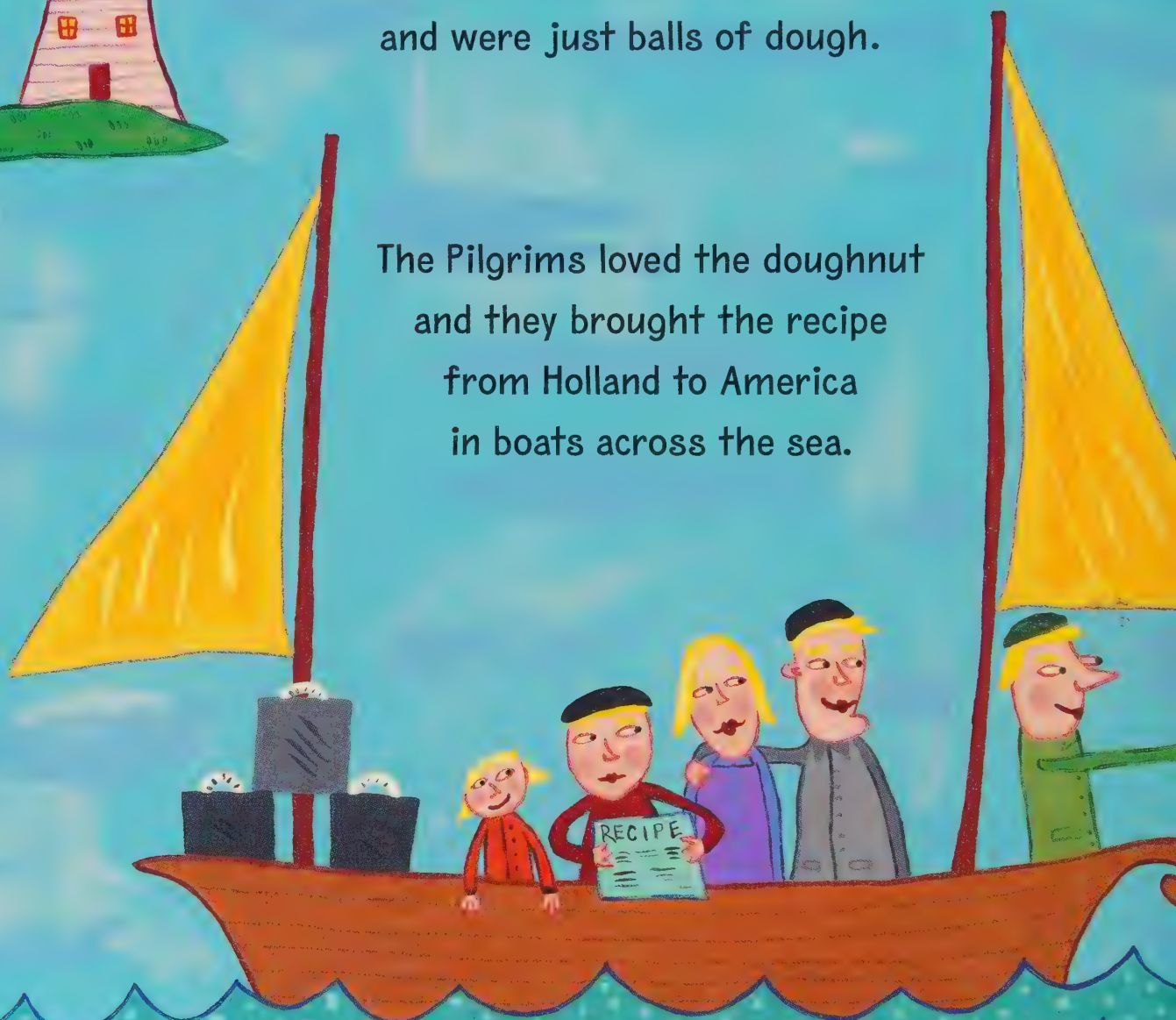


DOUGHNUT



The doughnut was invented
500 years ago.
The first ones didn't have a hole
and were just balls of dough.

The Pilgrims loved the doughnut
and they brought the recipe
from Holland to America
in boats across the sea.



There was a captain of a boat
who said, "I don't know why
doughnuts can't be bigger,
I'll just ask my mom to try."

He poked holes in the middle
so they'd cook more evenly,
then his mom cooked up the doughnuts
which they both ate happily.



Around 2 billion dollars
worth of doughnuts are
sold every year in the
United States.

The most popular
doughnut with kids
is the chocolate
frosted.

Midwest and West Coast people
seem to prefer raised doughnuts
while East Coast people seem to
like cake-style doughnuts best.

Who: Hanson Gregory was the
first to poke a hole in a doughnut.
Where: Rockport, Maine
When: 1847



FLAT-BOTTOMED PAPER BAG

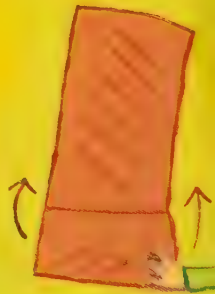


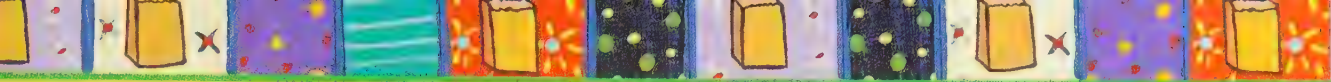
The flat-bottomed paper bag
long ago was hard to make,
and some said, "Not quite worth
all the trouble it would take."



Workers first would fold the bags
and then they'd add the glue.
This made the bags expensive,
plus it took too long to do.

Margaret was a lady
working in the factory.
She said, "Here's an idea
that could help this company."





"Wouldn't it be faster
if machines could make these bags?
I bet I could invent one
without too many snags."



In the year of 1870
her machine was finally done.
And today we use her bags
for groceries, lunch, and fun.



For the Earth Day Groceries Project, students paint grocery bags with Earth Day themes and return them to the store. The bags are then distributed to shoppers on Earth Day (April 22). In 1999, 1,135 schools participated and painted 374,472 bags.

America's super-
markets purchase
25 billion paper
bags a year.

Who: Margaret E. Knight
Where: Massachusetts
When: 1870



HIGH-HEELED SHOES



There was a short French king
in the sixteenth century
who said, "I must be taller.
It's just what I want to be!"



Now his subjects, they were loyal,
so they said, "What should we do?"

Said a timid little cobbler,
"I could build a higher shoe."



The king said, "These are great!"
and he marched around the court.
He was taller than before
and no longer feeling short.



But it happened all too fast,
for poor Louis the short king —
by wearing high-heeled shoes,
he'd begun a fashion thing.

Now with everyone in heels
he no longer seemed that tall,
so he had some new shoes made
that would tower over all.

It was then that he got angry
and he made a big decree,
saying, "No more high heels on a man!
Unless that man is me!"



Until 1650, heels were the
left shoes of right shoes
— both shoes were made
exactly the same.

The first shoes ever
made were sandals to
protect the feet from
rocks and sharp sticks.

Today there is still a heel style
called the Louis heel after the
king, but most high-heeled
shoes are worn by women.

When? Unknown
Where? France
When? 16th century



WHEELBARROW

Back in the year 200,
in China far away,
lived a man who carried things
most each and every day.



Mr. Liang was his name
and his arms were very strong,
but he worried that the carrying
would stretch them out too long.

He carried for the army.
He carried for his wife.
He was a man who moved things,
transportation was his life.





One day while on a narrow path
he said, "That's it, I'm through!
There's got to be a better way
to do the things I do."

He thought all through his dinner.
He thought while in his bed.
When he woke up he was smiling
because the plan was in his head.



He sawed and banged all morning
and by lunchtime he was done.
He'd made a handy wheelbarrow,
and it was the world's first one.



People also use wheelbarrows
in their gardens to transport
dirt and flowers from place
to place.

Today contractors building
high-rises or houses use
wheelbarrows the most.

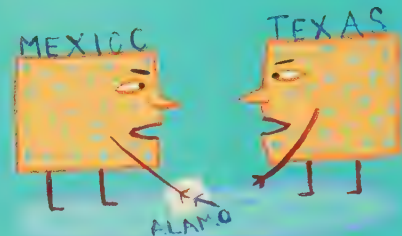
Wheelbarrows are still widely
used in rural China to transport
almost everything.

Who: Chuko Liang
Where: China
When: A.D. 200



CHEWING GUM

There was a famous general
who came from Mexico.
His name was Santa Anna
and he won the Alamo.



He moved to Staten Island,
1860 was the year,
and he loved to chew a gummy sap
that he said had no peer.

One day he met a man
who said, "Gee, that sap is neat.
I'll change it into rubber,
it will be an easy feat."





Even though he tried his best,
the inventor had no luck,
and he wondered what to do
with all the sap left in his truck.

He thought of Santa Anna
and of how he liked to chew.
So he said, "There must be others
who would like to do it too."



His Adams New York Gum
sold in 1871,
and it only cost a penny
and was loved by everyone.



North American kids
spend approximately
half a billion dollars
a year on gum.

The largest bubble
ever blown was 23
inches in diameter.

The most popular
flavors are pepper-
mint, spearmint, and
cinnamon.

Bubble gum is pink because
it is the only color dye the
inventor had when he was
making it.

Who: Thomas Adams
Where: Hoboken,
New Jersey
When: 1871



ROLLER SKATES

Joseph lived in Belgium
in 1759.

He loved to play his violin
and practiced all the time.

There was to be a party,
a fancy fun affair.

Joseph said, "I'll make an entrance,
so my friends will know I'm there."

Since the party was on land,
he knew ice skates wouldn't do,
so he took his favorite footwear
and put wheels under each shoe.



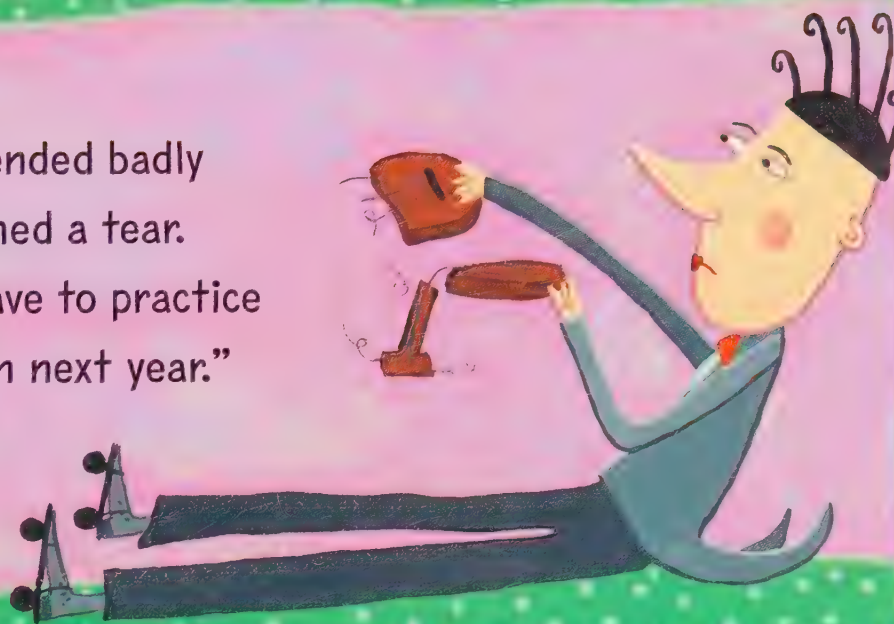


The night of the big party,
with wheeled skates upon his feet,
Joseph glided in while playing
and the crowd said, "Oh, how sweet."

But he hadn't practiced stopping
so he crashed into a wall,
and his violin was broken
'cause he'd smashed it in the fall.



So this time it ended badly
but he didn't shed a tear.
He said, "I'll just have to practice
and then try again next year."



Who: Joseph Merlin
Where: Belgium
When: 1759

The modern inline skate
(four wheels in a row)
was invented in 1966.

The first roller-skating
rink opened in 1866 at
a resort hotel in
Rhode Island.

The highest jump ever
made while wearing
inline skates was
8 feet 11 inches.

The fastest backward
roller skater reached a
speed of 46.69 miles
an hour.





SCARAB

MARBLES

There is a game that has been played
5,000 years or more.

It started back in Egypt
rolling stones across the floor.

STONES



NOT GOOD



GOOD



CAMEL

The stones were smooth and shiny,
and colorful and round,
and the children each took turns
rolling them across the ground.



RED SEA



PYRAMID



Children play it still today
with round balls made of glass.
In school yards and on sidewalks
(but never on the grass).

SMOOTH

GRASS



CAT'S EYE



CAIRO



Marbles are sometimes
used to throw heavy
stones by rolling the ball
over a marble pad.

Marble sizes range
from 1/2 inch in
diameter to 2 1/2
inches in diameter.

The most common marble
is called the cat's eye, a
clear marble with a colored,
four-leaf clover inside.

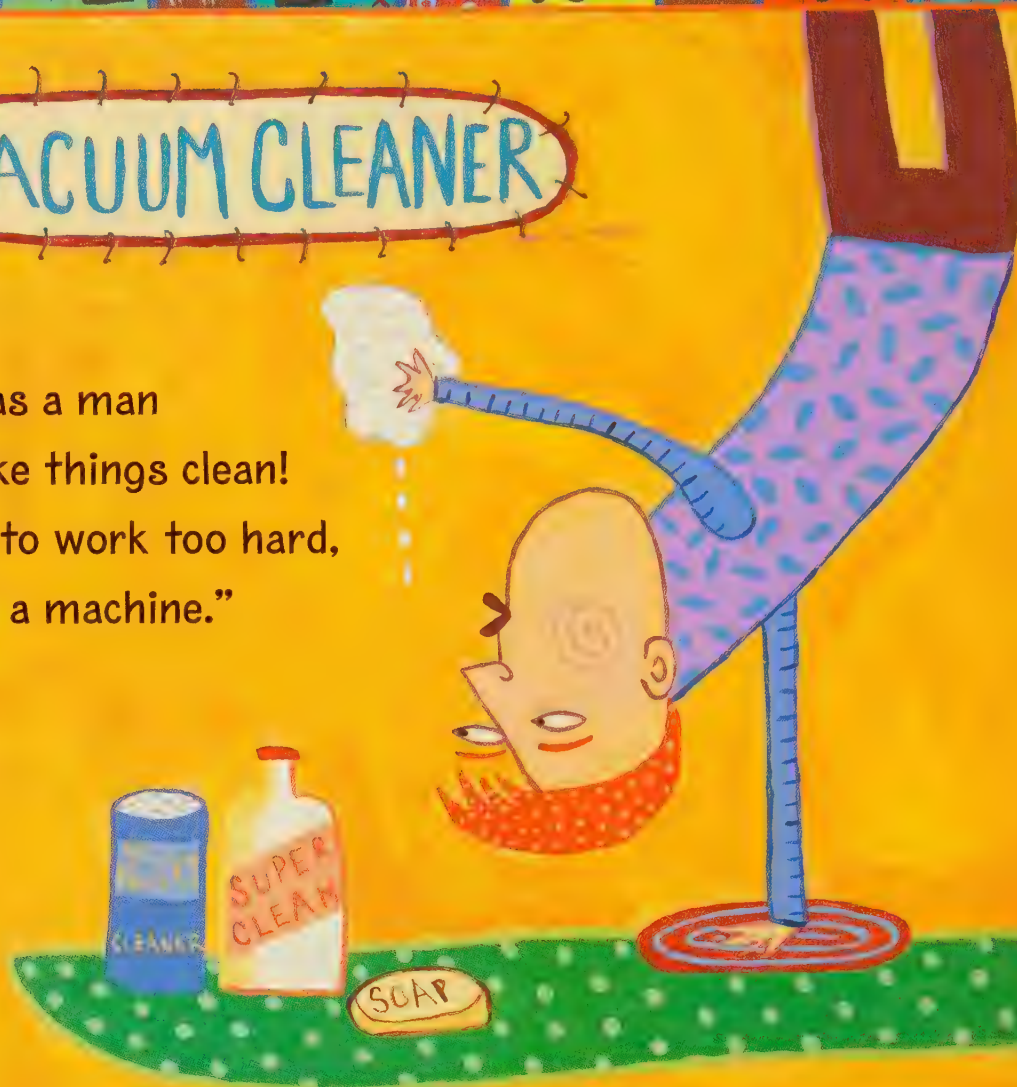
Recently a
marble sold
for \$15,000.

When unknown
Where: Egypt
When: 3000 B.C.



VACUUM CLEANER

Cecil was a man
who said, "I like things clean!
But I don't want to work too hard,
so I'll make a machine."



He did some strange experiments
and tried to suck up dirt,
from pillows and on furniture
until his lips were hurt.

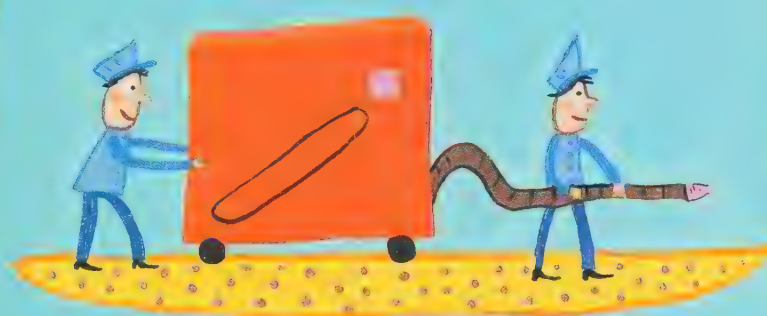




And then he tried some blowing,
but said, "No, that seems wrong!
I think I need a wind machine
that sucks up dirt real strong."



1901 was the year
that he built his first machine.
It took two men to operate
but really got things clean.



THEN



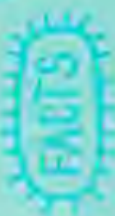
NOW



The first vacuum cleaner was as large as a refrigerator and took two men to operate — one to push it on its wheel and one to operate the hose.

Before 1901 most vacuums were side-to-side. A salesman would knock on your door and ask if you would like a demonstration. Then, and then he would come in and drop dirt on your carpet so you could see how well his vacuum could pick it up.

Where: Cecil Booth
Where: England
When: 1901



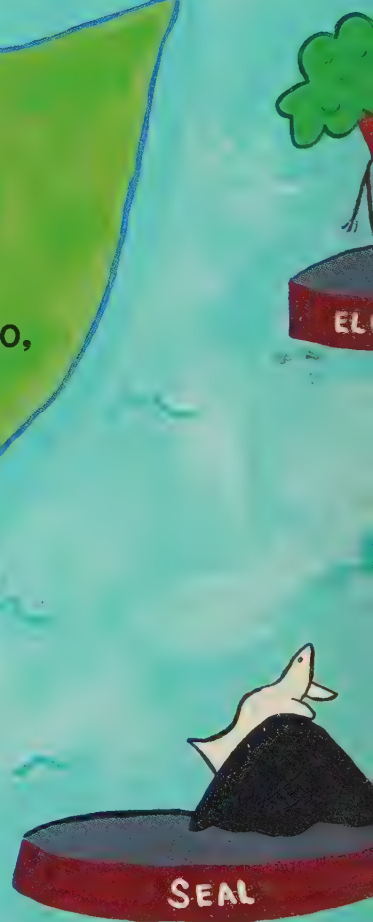
ANIMAL COOKIES

It happened back in England
over 100 years ago.

A cook said, "Let's make animals,
with all this cookie dough."



Then someone in America
said, "That's a great idea!
We'll do it, too, with a bigger zoo,
and sell those cookies here!"



They made eighteen new animals
and put them in a box.

A bear, a seal, and monkeys, too,
but not a pig or fox.



So you can bite a zebra's ear,
or chew on a giraffe,
or even nibble elephant toes
until they make you laugh.

Other animal cookies include: bison,
camel, cougar, hippopotamus, hyena,
kangaroo, rhinoceros, sheep, tiger,
and zebra.

The first animal cookies made in the U.S.
were made by Nabisco. They were called
Barnum's Animals, after the famous circus.

Who: Nabisco
Where: U.S.
When: 1902

Who: unknown
Where: England
When: 1890

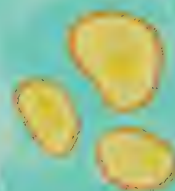


A LAST WORD ABOUT INVENTIONS

Some inventions solve a problem,
like glasses to help you see.
Then there are others just for fun,
like skates or the Frisbee.



Inventions can be lucky,
like the great potato chip,
or even come from other lands,
like doughnuts on a ship.



Inventors can be young
or as old as ninety-three,
they just need imagination
to see things creatively.

ALPHABET
BLOCKS
FOR THE
BLIND

(INVENTED 1996)




KRYSTAL: 11-YEAR-OLD GIRL INVENTOR



CHARISE MERICLE HARPER

lives in a house with two cats, two dogs, and a very nice husband. She is the author and illustrator of **WHEN I GROW UP**. Charise is especially thankful for the invention of muffins, which taste a lot like cake, except you get to eat them for breakfast.



How are inventions made?
Is it really hard to do?
To think of something people need
that's different and brand-new?

Open this book and find out the stories behind:

potato chips, piggy banks,
eyeglasses, doughnuts,
grocery bags, high-heeled shoes,
chewing gum, roller skates,
marbles, vacuum cleaners,
animal cookies, and more!

ISBN 0-316-39101-8



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