Women Awheel

The Evolution of Bicycles In The 1800s And How it Affected "The Fairer Sex"

Donna Scott
The History Center
June 10, 2017

Evolution of bicycle design in 1800s

The 1890s bicycle craze

Women and bicycles

- Dress
- Social codes
- Tool for women's rights & suffrage

Susan B. Anthony said, "…bicycling… has done more to emancipate women than anything else in the world."

The Hobby Horse or Draisine

Draisine invented 1817

A riding school in London

Draisine: Ladies Model

Ladies of the early 1800's riding drop-frame hobbyhorses.

have taken the fancy of the public, for women as well as men were seen scooting about park driveways in an abandon quite unseemly for the times. The so-called gentler sex were provided with drop-frame curricles, while the bolder among them scorned such concessions to femininity and sailed off astride strictly masculine machines. To the name "Pedestrian Curricle" the public added their own monikers, such as Dandy-Horse, Hobbyhorse, Swiftwalker, Patent Accelerator, Bicipede, Velocipede, Bivector, and doubtless many others proper or derisive.

Ladies' Draisine, or hobbyhorse, 1819.

Courtesy of The Science Museum, London, England

29

200 years later…

To help young children learn bicycle balance before graduating to a bike with pedals – no training wheels!

The Velocipede or Boneshaker

Pierre Lallement astride an early bicycle

Late 1860s

The Velocipede or Boneshaker

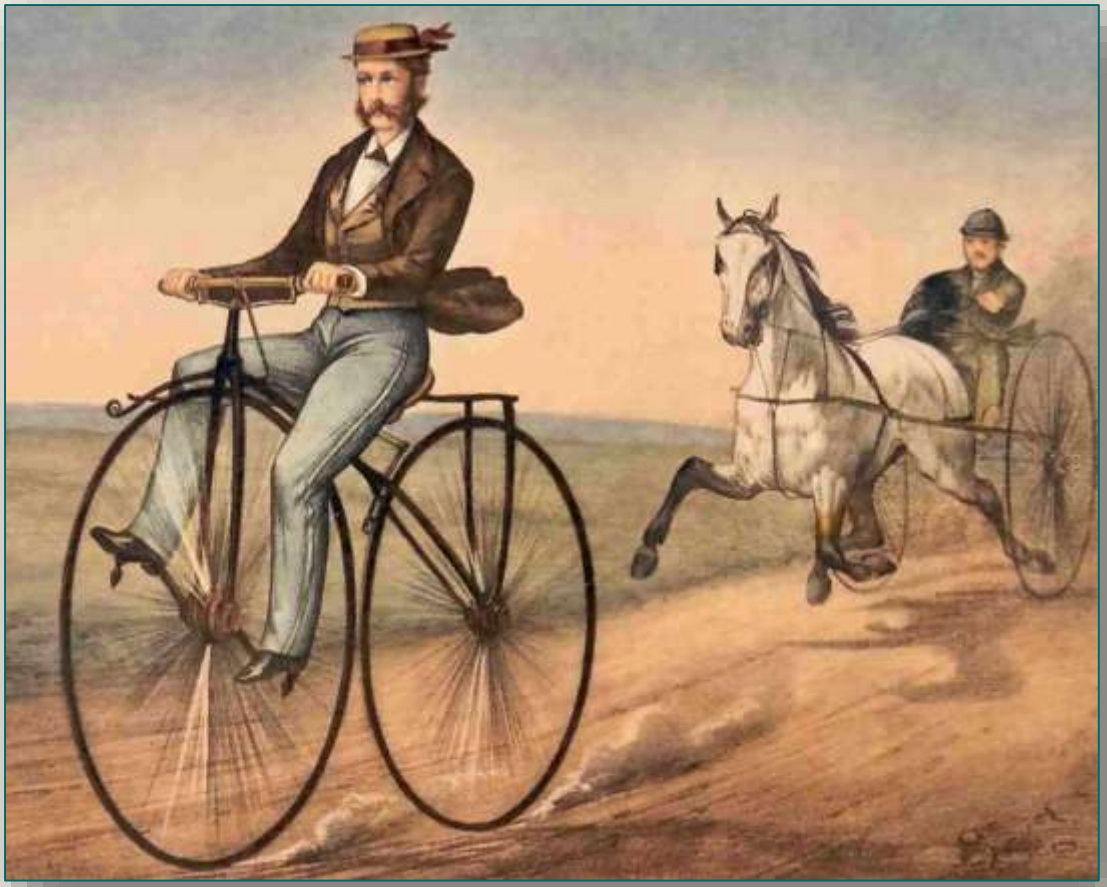
Velocipedomania

French women may have ridden velocipedes in clothes like this, but American women probably did not!

American velocipedes in New York City.

The brake over the back wheel is applied by the rider pressing downwards on the saddle.

The Velocipede or Boneshaker



The Death Of The Horse

The Velocipede or Boneshaker

Transitions

About 1870

The Ariel of 1871

High Wheel Bicycle or ‘Ordinary’

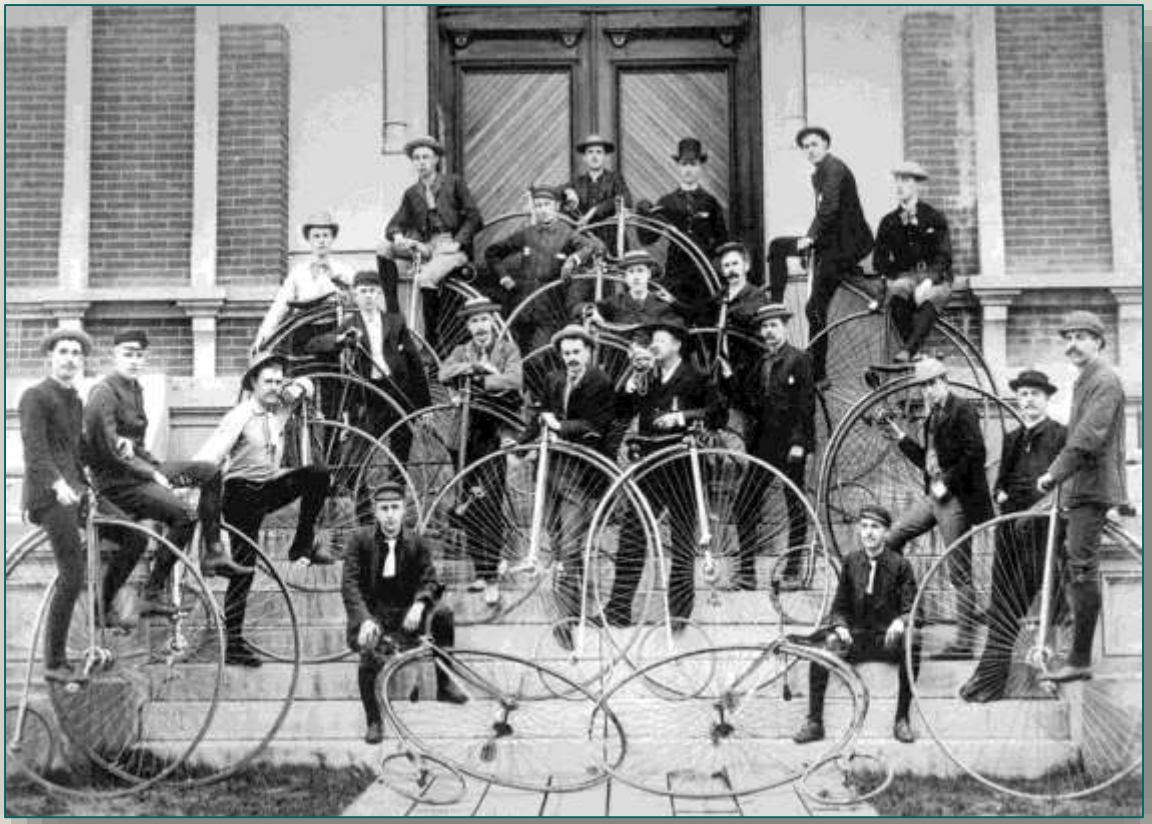
U.S. letter carrier riding
Columbia Volunteer, 1880s

How do you get on that thing?

How do you get on that thing?

Ordinary Bicycling Life

Bicycle Clubs



Men's Uniforms

High Wheel Races

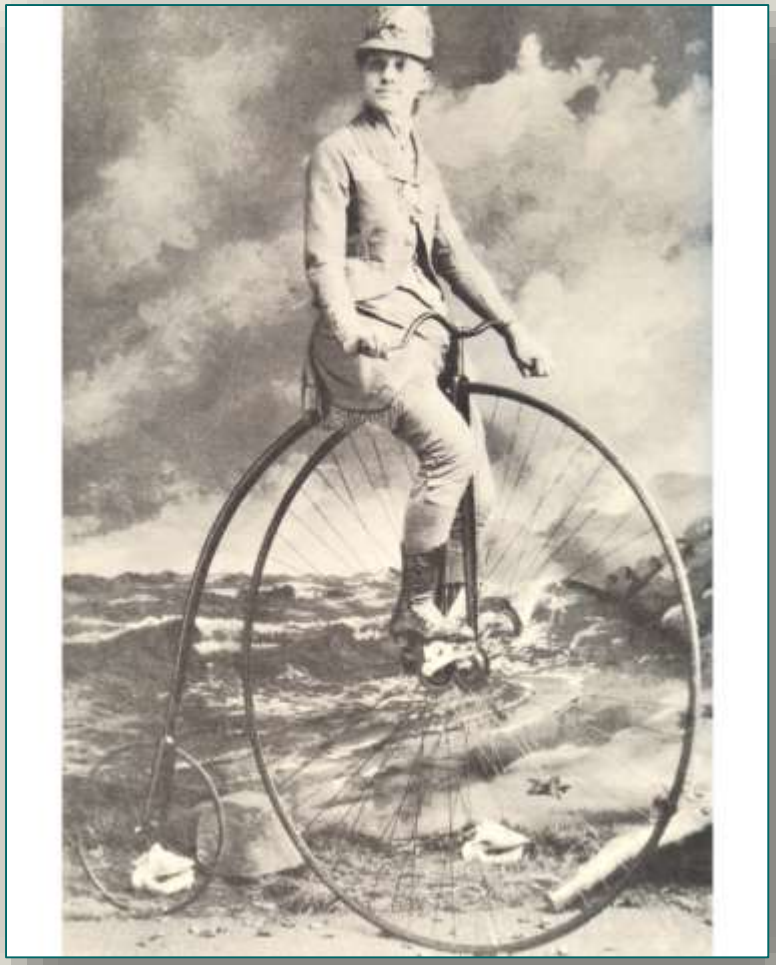
No Ordinary Ride

Thomas Stevens left San Francisco in 1884 and rode his "ordinary" high wheeler all the way around the world!

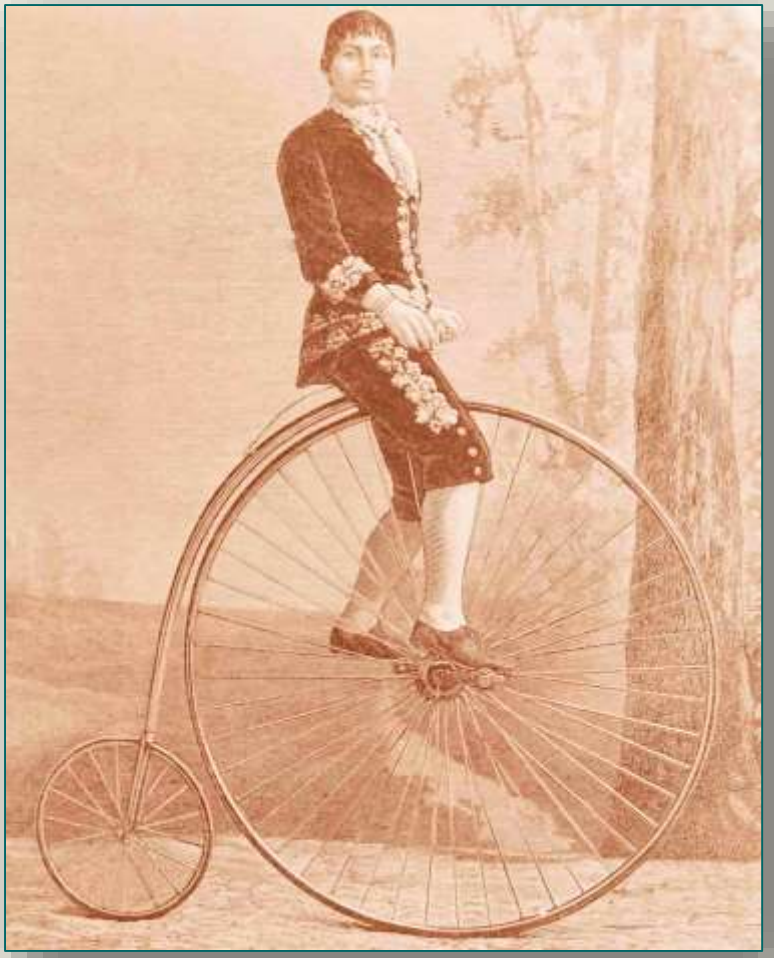
He described his journey in detail in a 2-volume book, *Around the World on a Bicycle,* published in 1886 & 1887.

A Boy and His Bicycle

Women Awheel: High Wheel Racers



Elsa von Blumen, Rochester, NY

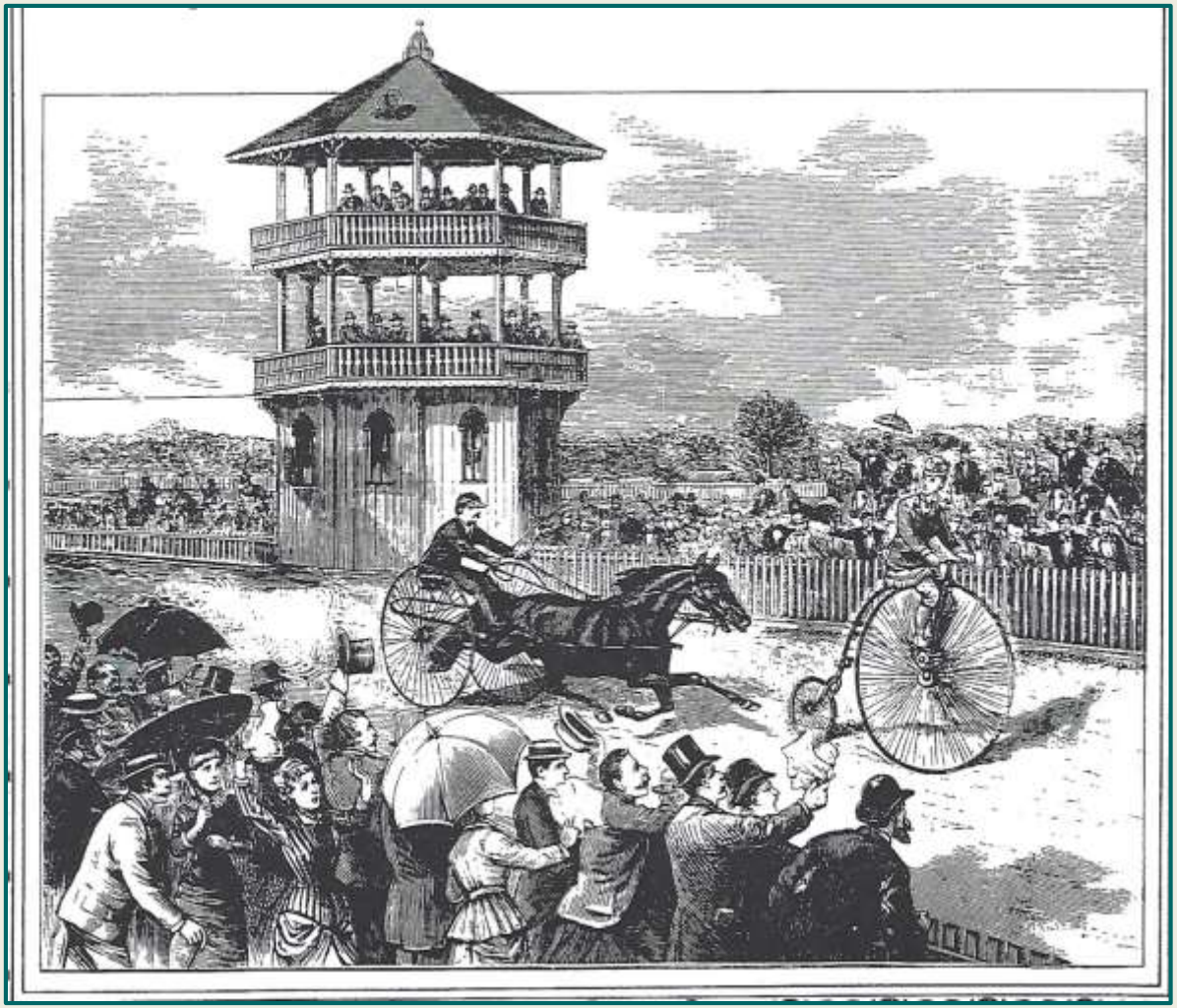


Louise Armaindo, Quebec

Women Awheel: High Wheel Racers

Elsa von Blumen races the celebrated mare, Hattie R, May 24, 1881 at Driving Park in Rochester, NY.

Elsa won by a second in each of 3 races.



Tricycles


HOWE
BICYCLES
TRICYCLES
TRADE MARK
MANUFACTURED BY
THE HOWE MACHINE C° L^d
GLASCOW
TRADE MARK
48
BOULEVARD DE SÉBASTOPOL
48
PARIS

Wheeling on Riverside Drive NYC

Cycling and Women: Clothes

L.L.Bean - 2017

Catalog blurb:

DESIGNED FOR A REASON

The most innovative gear.
The best active apparel.

Because getting outdoors should be easy for everyone.

Tricycle Design

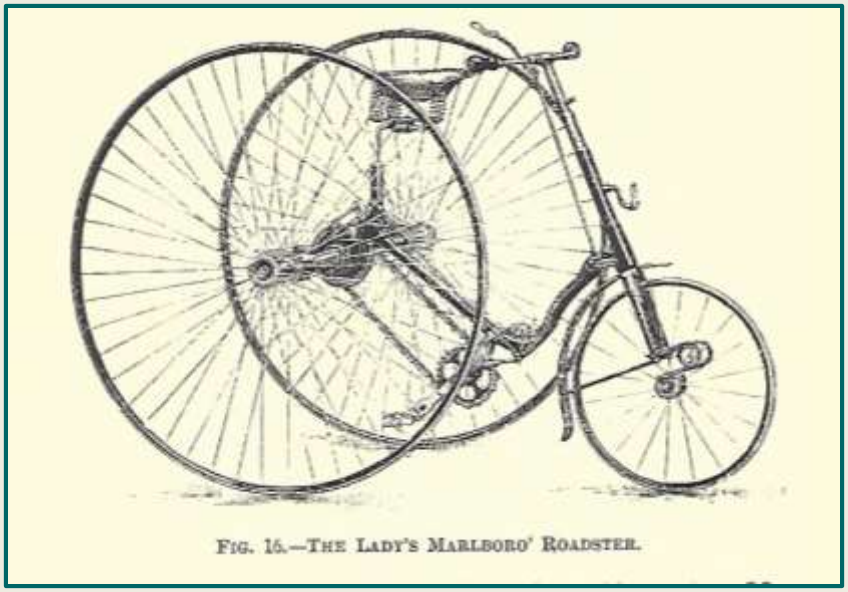


Fig. 16.—The Lady's Marlboro' Roadster.

Lady's tricycle w moveable front fork "…it has an arrangement whereby the front pillar and handles may be pulled up straight, so that a lady can mount in front without having to squeeze between the bar and the wheel, thereby muddying her garments, or scrambling up over the axle at the back." (Would have chain guard, too).

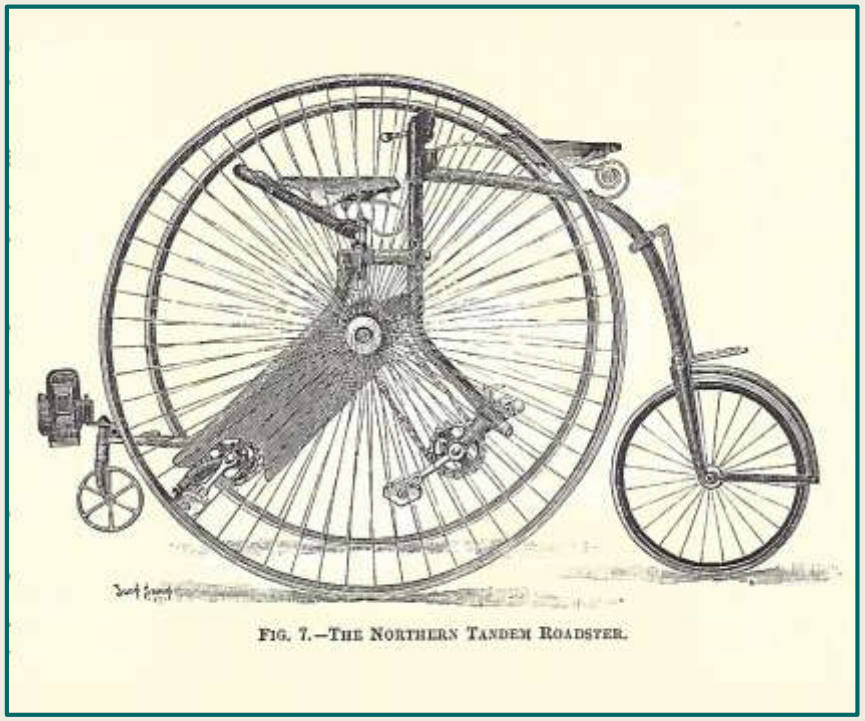


Fig. 7.—The Northern Tandem Roadster.

Lady-front tandem tricycle with chain guard "… a guard effectively covers up the chain, and any parts likely to catch the dress."

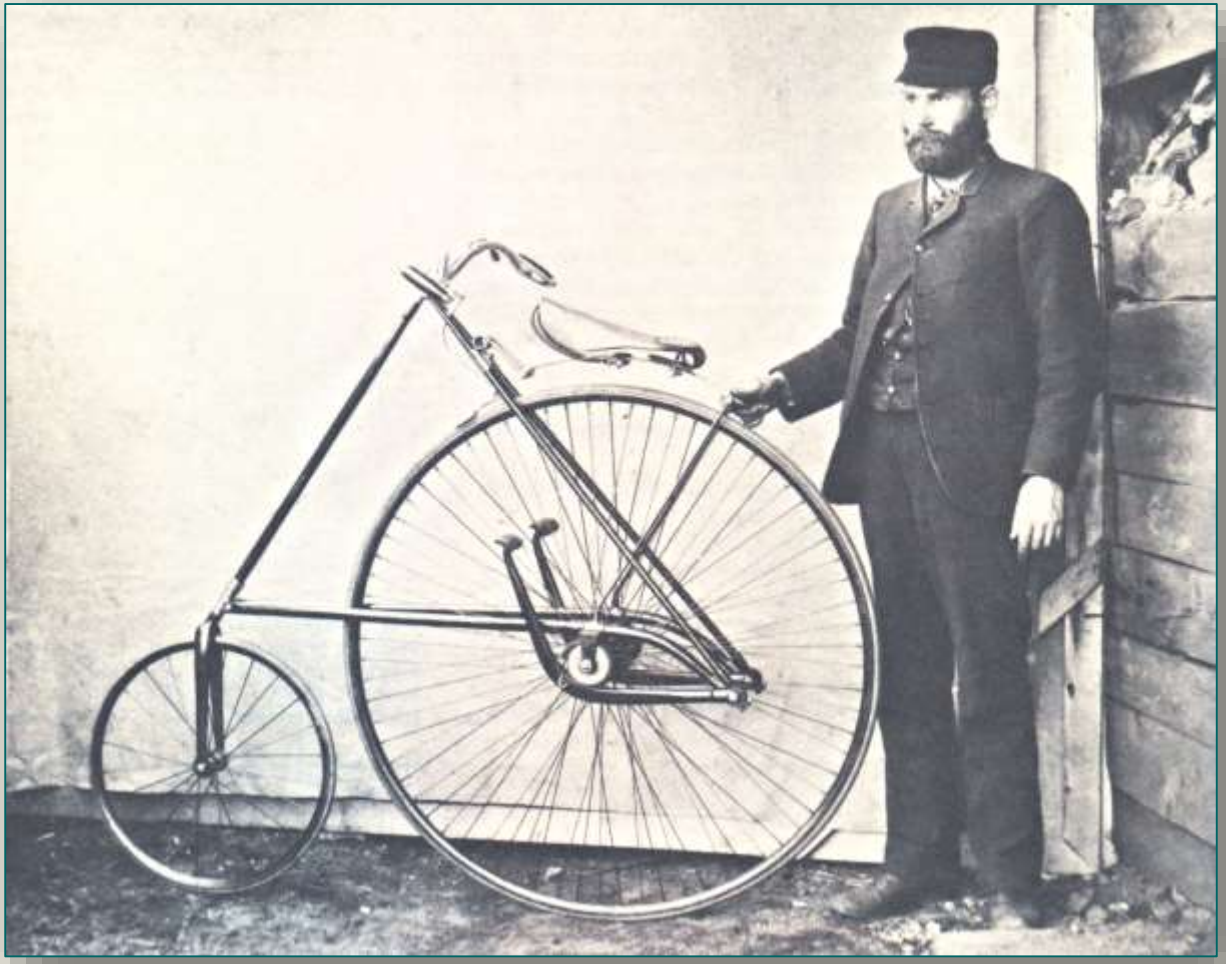
Children's Tricycles

The Need for Safety

The good spirits of popular rider Dr. Jim Thompson of California persisted even after a nasty header that broke both arms. Here he chats with Commander Emeritus Robert McNair.

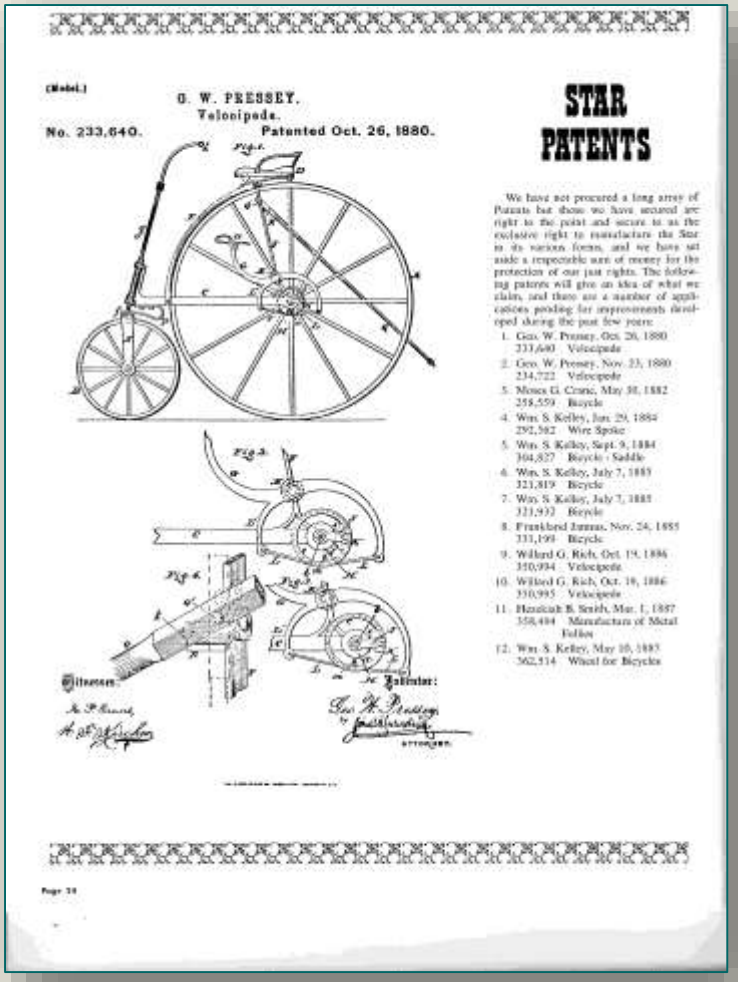
No one will forget the thrill of riding down star-spangled Chestnut Street on the final stretch to Independence Hall.

American Star
High Wheel Safety Bicycle



Manufactured & perfected from1880 to 1890.

Bright Ideas for The Star



(Model.)

G. W. PRESSEY.
Velocipede.

No. 233,640. Patented Oct. 26, 1880.

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Witnesses:

Inventor:

ATTORNEY.

STAR PATENTS

We have not procured a long array of Patents but those we have secured are right to the point and secure to us the exclusive right to manufacture the Star in its various forms, and we have set aside a respectable sum of money for the protection of our just rights. The following patents will give an idea of what we claim, and there are a number of applications pending for improvements developed during the past few years:

1. Geo. W. Pressey, Oct. 26, 1880 233,640 Velocipede
2. Geo. W. Pressey, Nov. 23, 1880 234,722 Velocipede
3. Moses G. Crane, May 31, 1882 258,559 Bicycle
4. Wm. S. Kelley, Jan. 29, 1884 292,582 Wire Spoke
5. Wm. S. Kelley, Sept. 9, 1884 304,827 Bicycle - Saddle
6. Wm. S. Kelley, July 7, 1885 321,819 Bicycle
7. Wm. S. Kelley, July 7, 1885 321,932 Bicycle
8. Frankford Jumns, Nov. 24, 1885 331,199 Bicycle
9. Willard G. Rich, Oct. 19, 1886 350,934 Velocipede
10. Willard G. Rich, Oct. 19, 1886 350,995 Velocipede
11. Hezekiah B. Smith, Mar. 1, 1887 358,484 Manufacture of Metal Felloe
12. Wm. S. Kelley, May 10, 1887 362,514 Wheel for Bicycles

Page 14

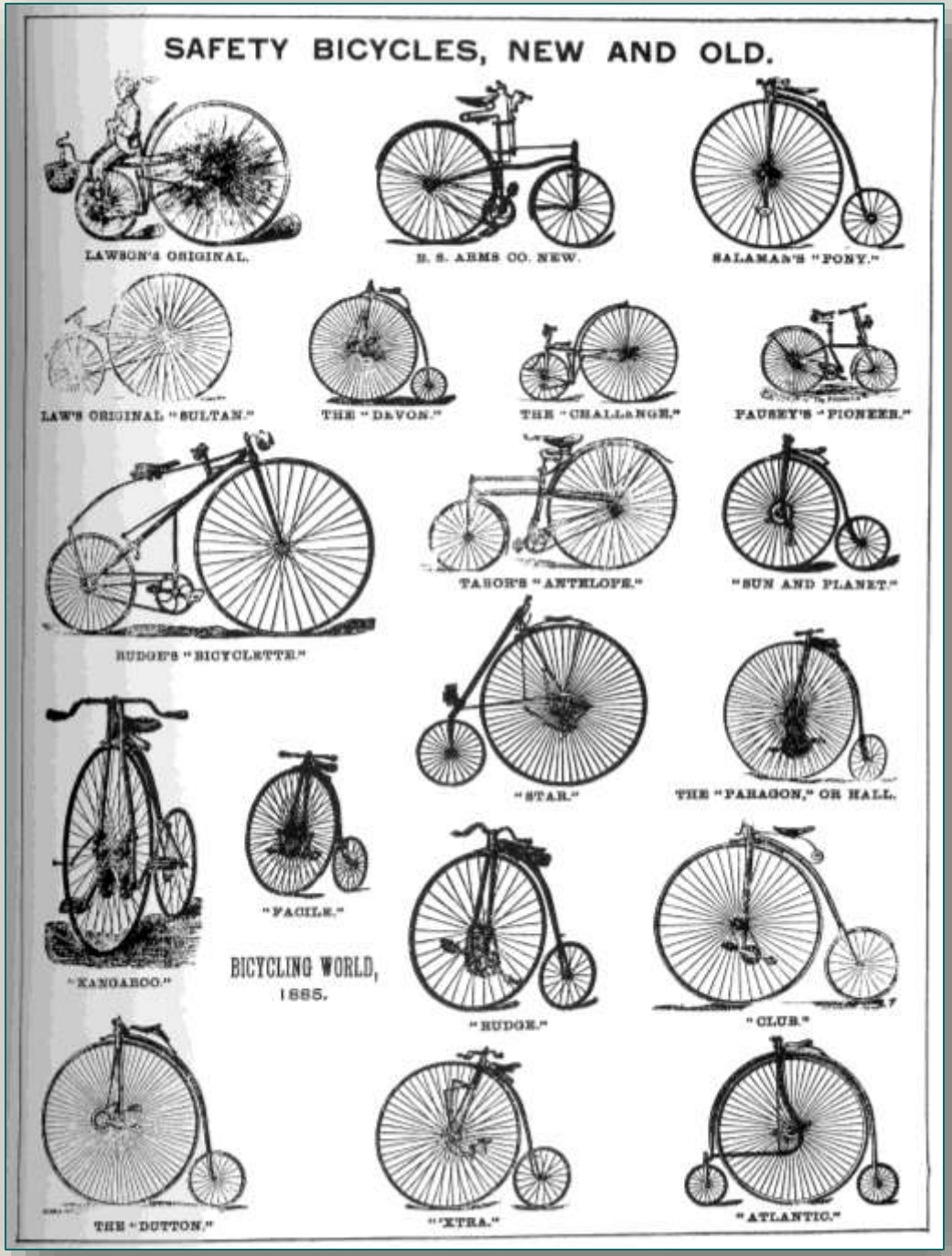
THE COPELAND STEAM STAR

Springfield Wheelman's Gazette, March 1885

This wheel, built by L. D. Copeland in 1885, has a reciprocating steam-engine attached to the bar which connects the handle with the small wheel in front. Benzine is used for heating purposes and steam can be got up in a few moments. At the present time the supply of the fuel and water has to be replenished every hour, but with anticipated improvements supplies enough for several hours will be provided for. Ninety pounds of steam can be carried, but the machine can be run with twenty pounds. The machine averages about five minutes a mile over an ordinary road. The pedals can be used in conjunction with the steam power whenever necessary, and the speed will be increased accordingly; when the steam power only is used the pedals are brought into requisition for foot rests. By the unscrewing of two bolts the entire machine can be taken off and there remains the ordinary "Star" bicycle in its entirety. Possibly the reader has pictured a machine which is both awkward and cumbersome, so he will be all the more surprised when he learns that everything connected with the steam part of the bicycle, the boiler, water tank, engine, benzine tank and all the appliances weigh only eighteen pounds. The engine is furnished with quarter horse power. The machine has reached the present state of perfection only after four years of continuous study and experimenting by the inventor, Mr. L. D. Copeland, of Phoenix, Arizona. At the request of several wheelmen Mr. Copeland gave an exhibition with the machine at the Mechanics' Pavilion, San Francisco. The few gentlemen who were fortunate enough to be present were unanimous in the praise of the invention. The ingenuity of the contrivance is a matter of astonishment to those of a mechanical turn of mind. Mr. Copeland has patented the invention, and is negotiating with the large bicycle firms in the East for the purpose of entering into some engagement for the manufacture of the steam bicycle.

Page 13

Safety Bicycles in 1885



Starley's Safeties, C.1885 (British)

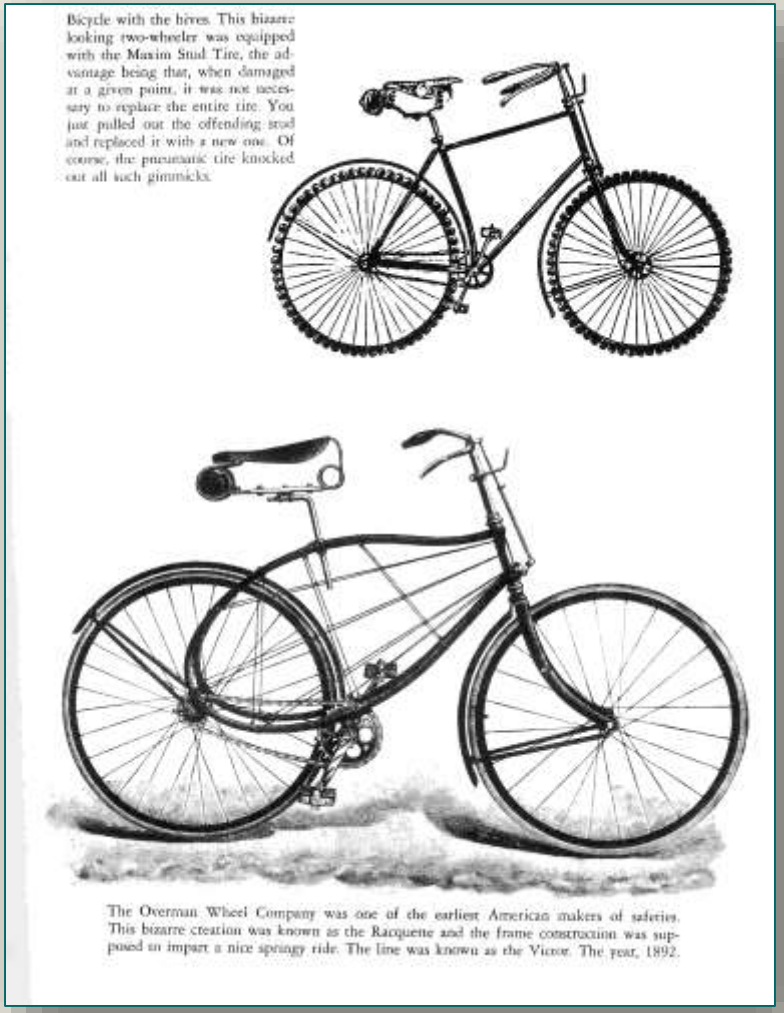
James Starley, to whom a monument was erected to memorialize his eventual perfection of the basic bicycle design that has come down to us through the years since the early 1880's, named his contribution the Rover. This is the 1884 model, with indirect steering, and was not particularly successful. He really struck fire in 1885.

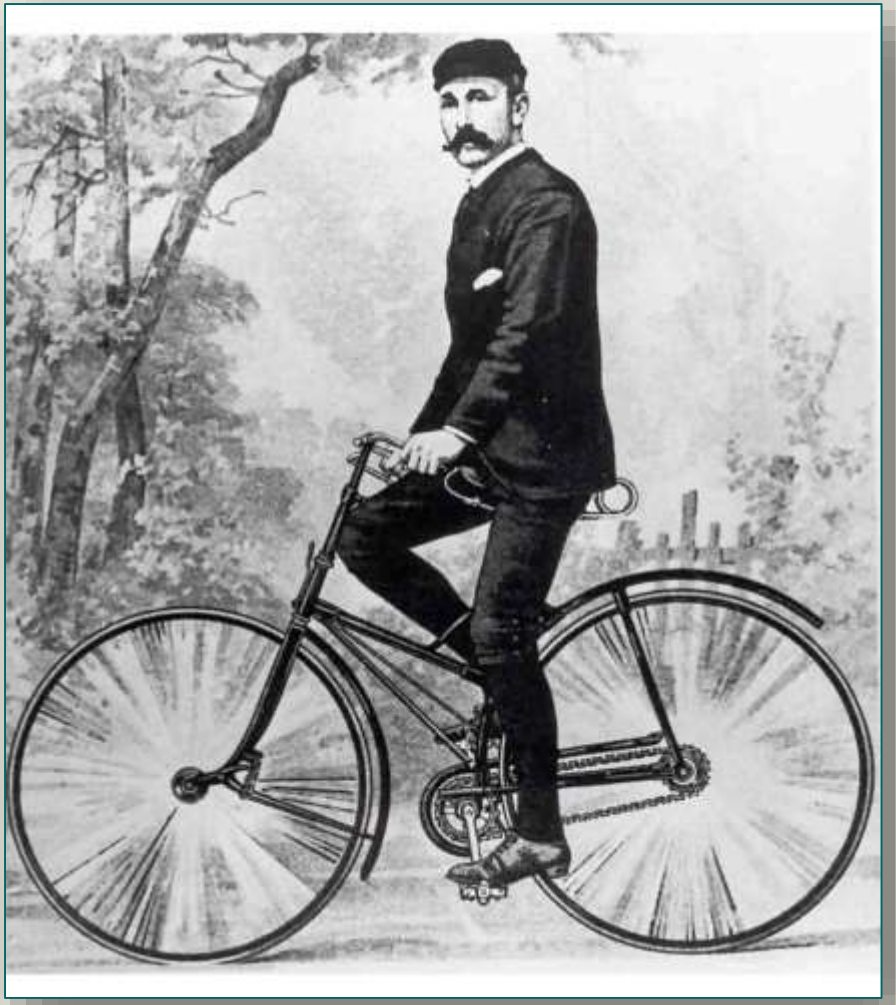
Starley's improved Rover of 1885. Direct steering was adopted, the frame was redesigned, and coasters and a brake were added. With this he started to go places.

For some unknown reason James Starley switched to a cross-frame design reinforced by wire stays. A bell and lamp bracket were added. This machine was known as the Psycho, for which, in 1887 the manufacturer was awarded a gold medal at the International Exhibition at Toulouse, France.

Photograph from The Smithsonian Institution

Hard Tires and Odd Frames

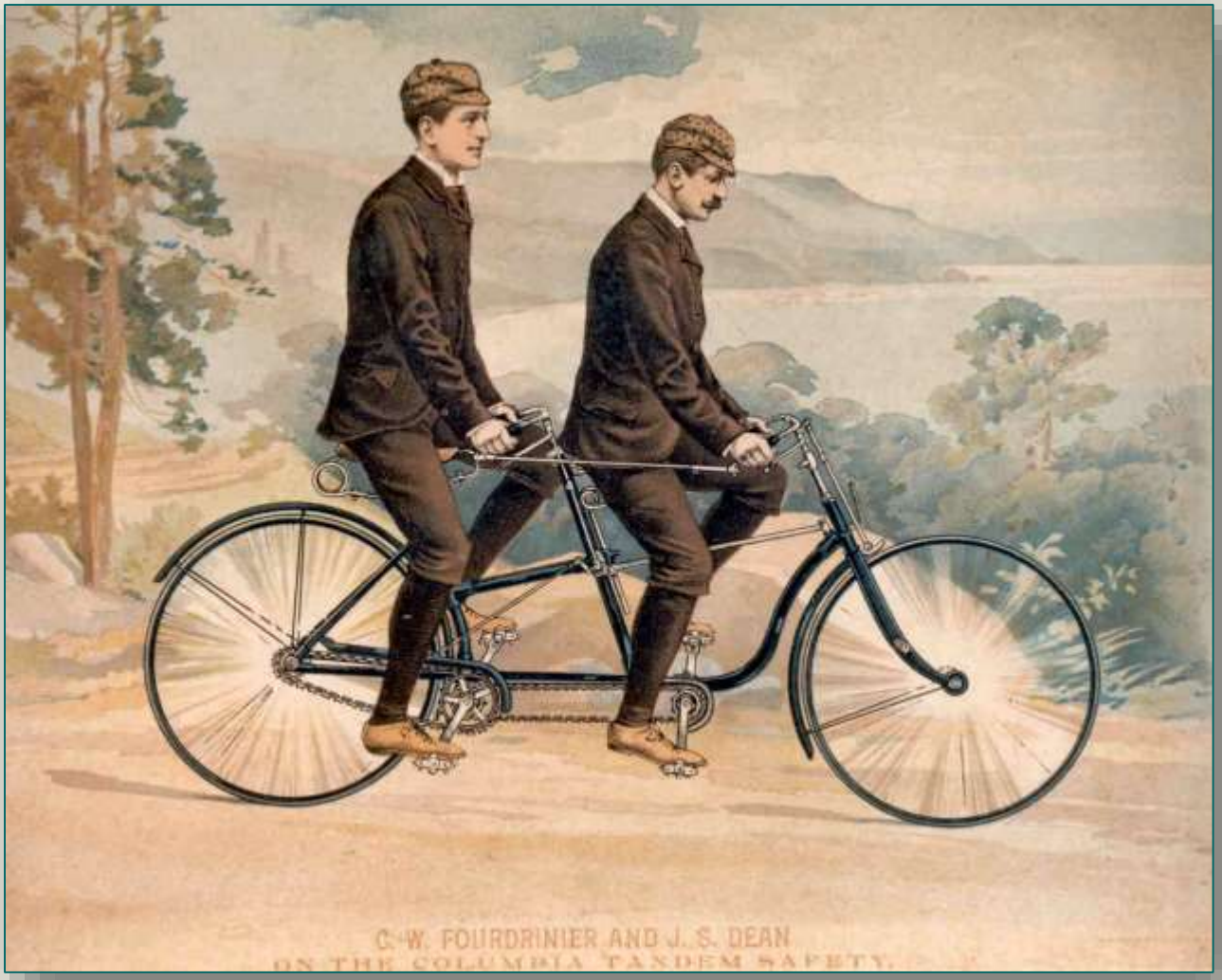




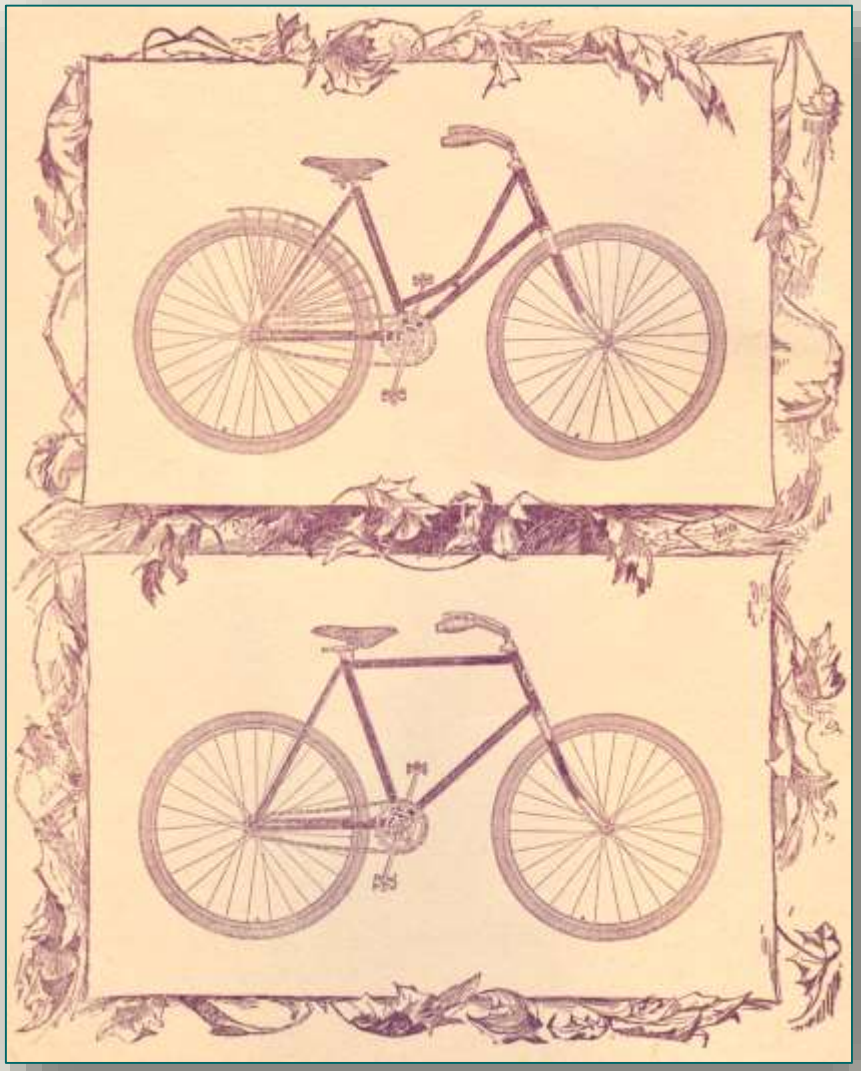
Drop-Frame Hard-Tired Safety

Early
1890s

Columbia Tandem Hard Tired Safety



Diamond Frame & Pneumatic Tires



Finally, a strong, comfortable machine that relates well to the human body.

Stable, strong diamond frame.

Wooden handle bars, wheel rims, fender & chain guard (women's model).

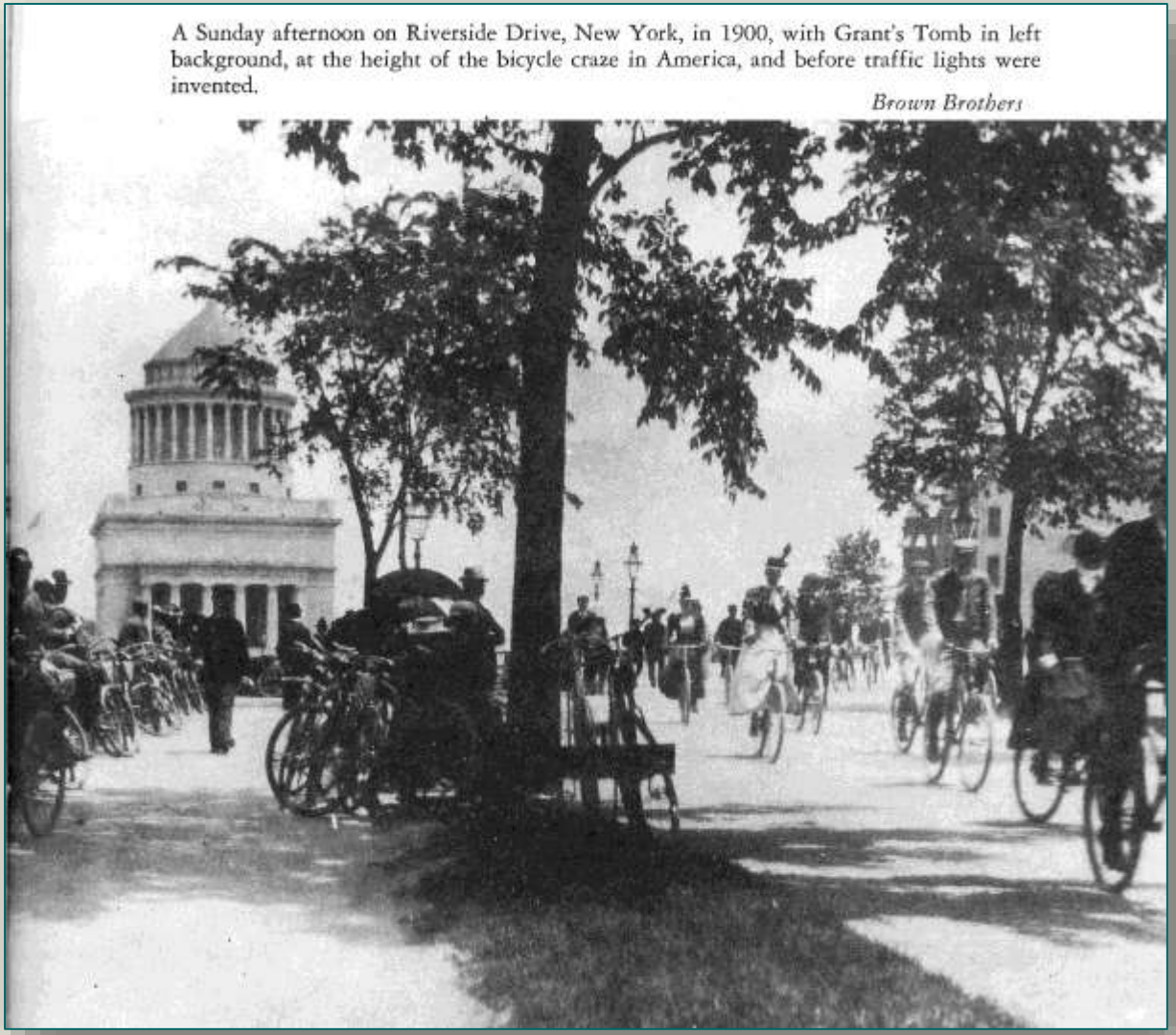
Cork hand grips.

Spoon brake on tire (not shown).

1897 – 2 million bicycles sold.

<< *From*
1898 Mead Cycle Co. catalog

Bicycle Craze in America

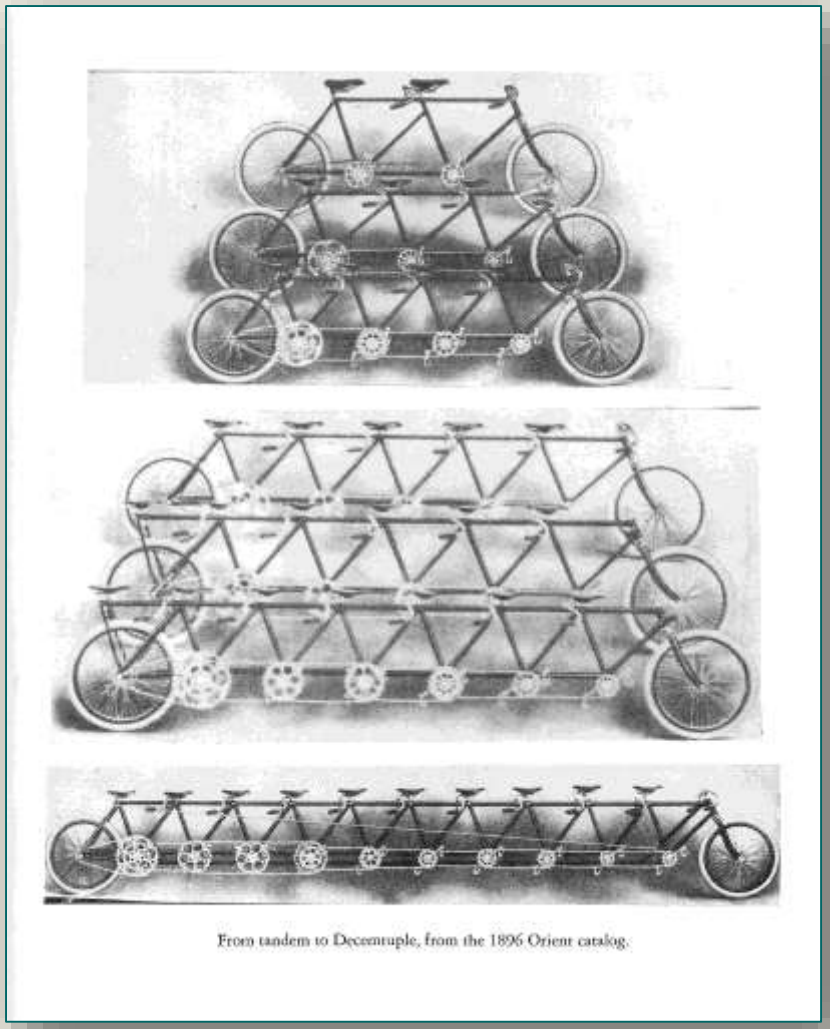


A Sunday afternoon on Riverside Drive, New York, in 1900, with Grant's Tomb in left background, at the height of the bicycle craze in America, and before traffic lights were invented.

Brown Brothers

Bicycle Craze in America

Bicycle Craze: 1896 Tandems



From tandem to Decemtuple, from the 1896 Orient catalog.

Bicycling in the 1890s for Women

Bicycling & Women: Clothes

Corsets 1800s/ Wasp Waist

Amelia Bloomer 1855 >>

Bicycling & Women: Clothes

Rational Dress Movement begins

Bicycling & Women: Clothes

Bicycling & Women: Clothes

Bicycling & Women: Clothes

BICYCLE FASHIONS.

HOW TO FINISH BICYCLE SUITS.

If not properly finished, the cycling suit cannot present the smart and trim appear it should. As the sewing should be strong and firm, it is important that it be done by mac A few slipped or broken stitches may cause a serious accident, and these may be looked for when sewing is done by hand.

Unless a skirt is made of cloth, corduroy or equally heavy woollen goods, lining is required. In unlined skirts the seams are either clipped or bound with narrow silk galloon, preferably the latter. (Illustration 1.) The outside and lining—the bottom may be of percaline or soft-finished cambric—are always made separately, the seams being hidden. The bottom is turned up for a depth of four inches for a hem, which is interlined with canvas, galloon binding its edge or being sewed over the edge of the hem. A decorative finish, and one admissible for a cycling skirt, may be contributed by rows of machine-stitching half an inch apart in the hem.

Instead of a hem a four-inch-wide facing of leather (illustration 1) or of the material may be used, being cut to fit the skirt and finished at the top with binding the same as a hem. With a leather facing interlining is not needed.

ILLUSTRATION 1.

ILLUSTRATION 2.

ILLUSTRATION 3.

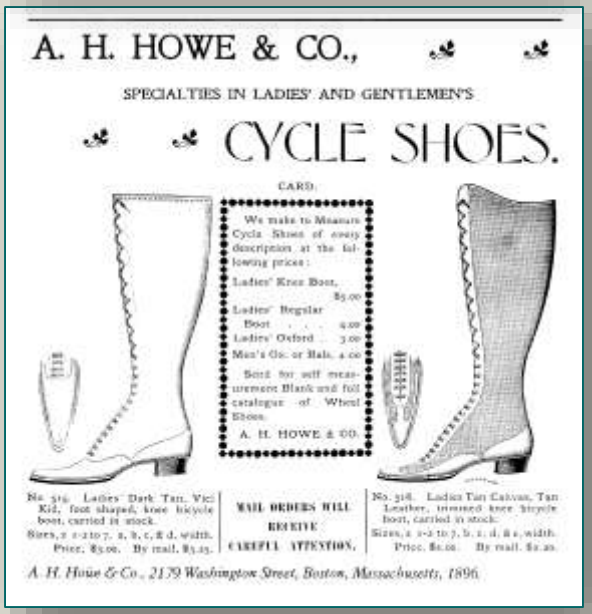
ILLUSTRATION 4.

The skirt is usually kept down by a narrow silk elastic strap sewed underneath at each side. It starts at the top of the hem or facing, a loop being made at the lower end to fasten it to one of the upper buttons of the legging. (Illustrations 2 and 3.) This is far more effectual than shot, which adds considerably to the weight of a skirt.

The laps which conceal the pocket and placket openings are interlined with canvas and lined with silk or the material and stitched to correspond with the hem.

Wherever buttons are used on a skirt they should be stayed underneath by tape. Flat bone buttons with holes are the most practical. They should be sewed on loosely through the tape with strong thread, which should be twisted several times around the sewing and then fastened well underneath. Underlaps plackets are cut about three inches wide; the lower front corner of the underlap is faste to the gore without showing stitches.

CYCLING HATS FOR THE OPENING SEASON



A. H. HOWE & CO.,

SPECIALTIES IN LADIES' AND GENTLEMEN'S

CYCLE SHOES.

CARD.

We make to Measure Cycle Shoes of every description at the following prices:

Ladies' Knee Boot, $5.00
Ladies' Regular Boot . . . 4.00
Ladies' Oxford . . 3.00
Men's Cle. or Hals. 4.00

Send for self measurement Blank and full catalogue of Wheel Shoes.

A. H. HOWE & CO.

No. 514. Ladies' Dark Tan, Vici Kid, foot shaped, knee bicycle boot, carried in stock. Sizes, 2 1-2 to 7, A, B, C, & D, width. Price, $5.00. By mail, $5.25.

MAIL ORDERS WILL RECEIVE CAREFUL ATTENTION.

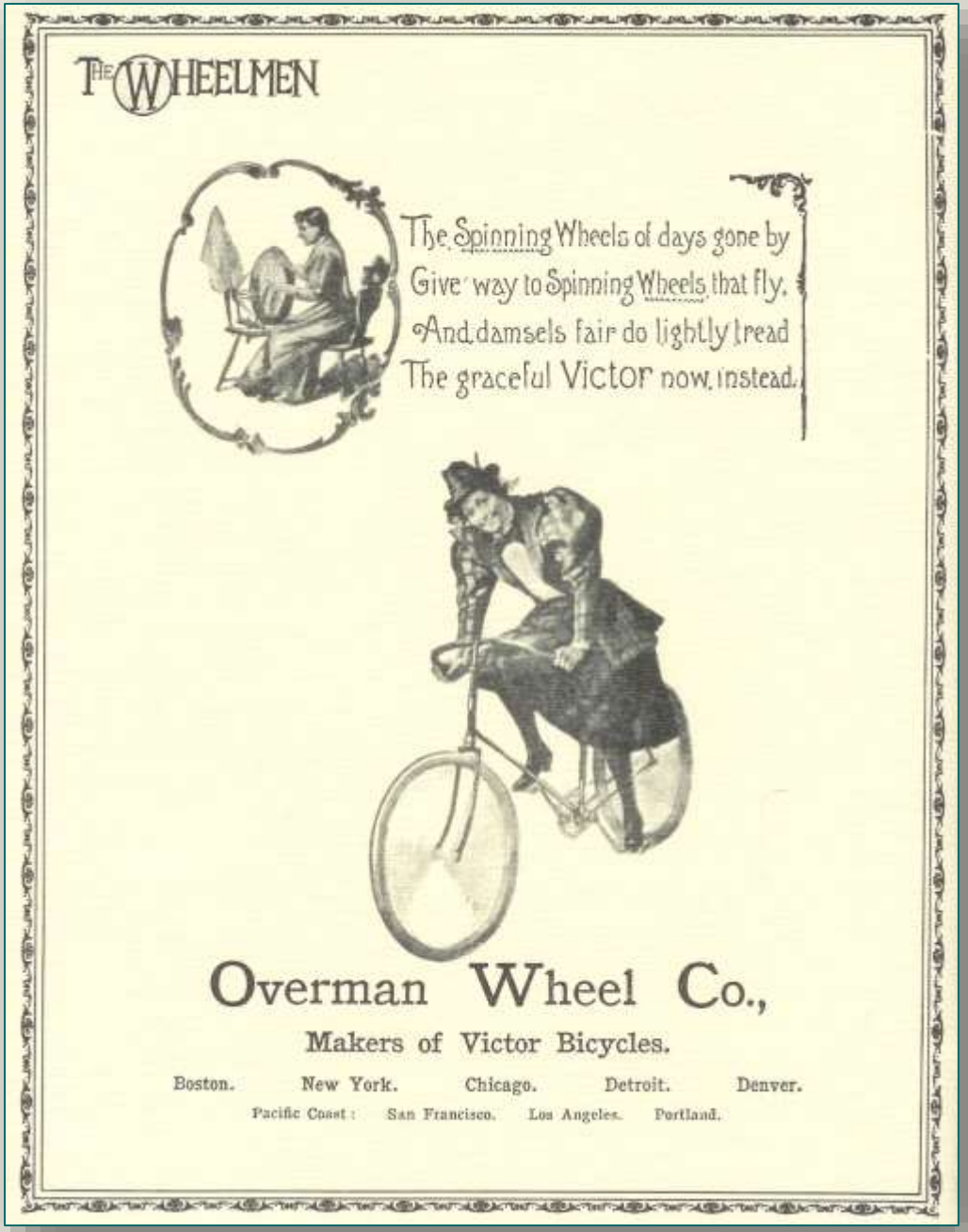
No. 518. Ladies Tan Canvas, Tan Leather, trimmed knee bicycle boot, carried in stock. Sizes, 2 1-2 to 7, B, C, D, & E, width. Price, $4.00. By mail, $4.20.

A. H. Howe & Co., 219 Washington Street, Boston, Massachusetts, 1896.

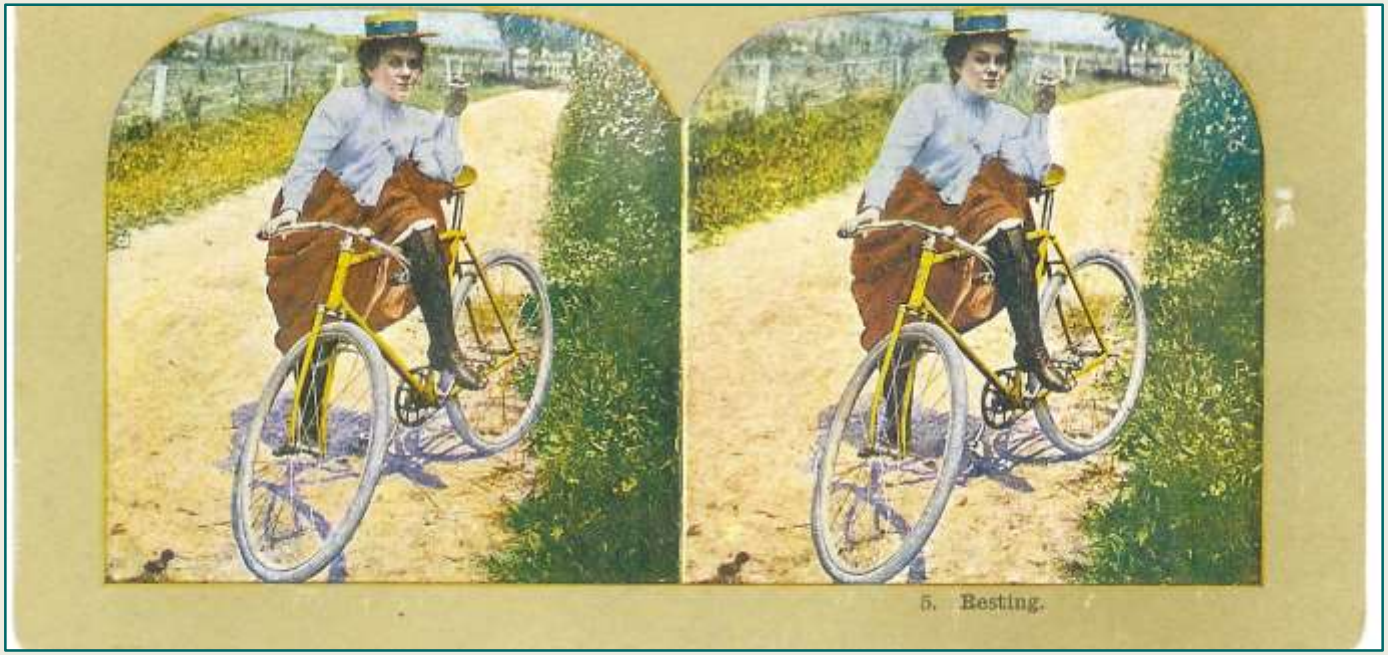
Bicycling & Women: Clothes

It appears that many women awheel kept long skirts, but the move towards rational dress was firmly entrenched.

Bicycling and Women: Social Codes



Bicycling and Women: Social Codes



"There is an alarming increase in immorality of young women in the United States because of evil associations and opportunities [bicycling] made possible!" -*Charlotte Smith, 1896*

Bicycling and Women: Social Codes

"Parents who will not allow their daughters to accompany young men to the theater without a chaperone, allow them to go bicycle riding alone with young men."

-newspaperman Joseph Bishop, 1896

Bicycling and Women: Social Codes

Some people worried that the bicycle might permanently change women's role in society by fostering their independence.

Benefits For Women Awheel

"Of course, I do not believe that bicycling is immoral. A girl who rides a wheel is lifted out of herself and her surroundings.

She is made to breathe purer air, see fresher and more beautiful scenes, and get an amount of exercise she would not otherwise get.

All this is highly beneficial."

– Ellen Parkhurst, minister's wife, *Evening Times* Washington DC, mid 1890s

The Young Women's Christian Association of Binghamton, NY established a wheel club in open defiance of those who disapprove of bicycles.

-*Sporting Life*, Philadelphia, Oct. 14, 1893

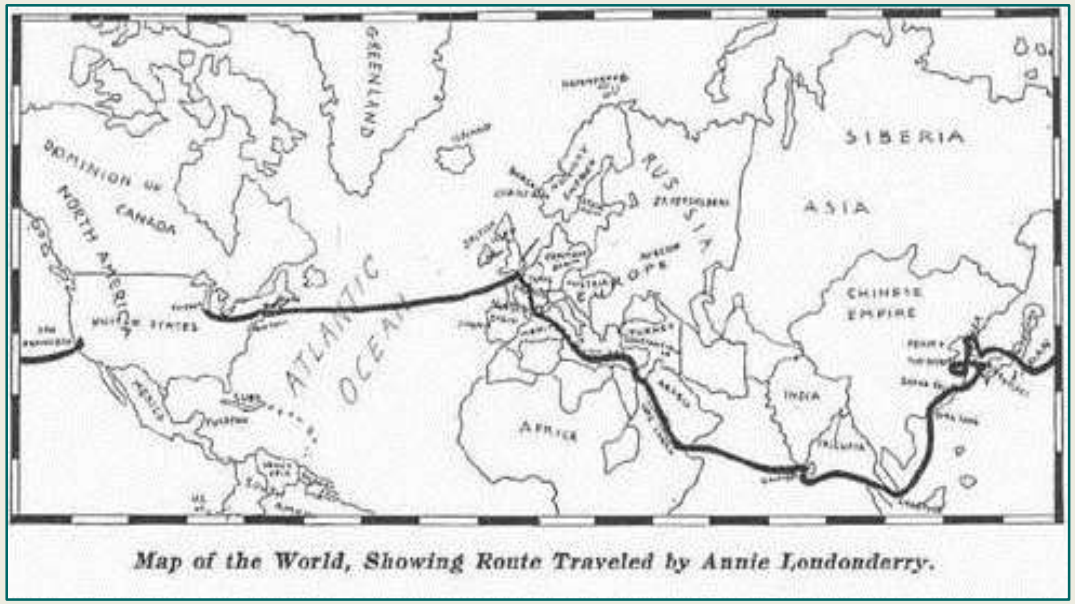
Celebrity Women Awheel

- **Queen Victoria** ordered 2 tricycles in 1880s.
- **Lillian Russell**, opera singer, had gold-plated safety bicycle.
- **Belva Lockwood**, 1st woman presidential candidate; rode tricycle in Washington DC in 1884.
- **Frances B. Johnston**, White House photographer under 5 Presidents: Took selfie dressed as man w/Ordinary highwheeler.
- **Katharine Wright,** sister of Wright Bros. regularly rode in 1890s.
- **Annie Oakley** used bicycle as well as horse in Wild West Show.
- **Marie Curie** & husband took honeymoon trip awheel.
- **Frances Williard**, founder WCTU, learned to ride when age 53.
- Many "firsts" among women on 1890s safety bicycles: racing, century runs, long distance riding. **(Dora Rinehart, Jane Yatman, Jane Lindsay)**.

Annie Cohen Kopchovsky ("Annie Londonderry")

- 24-year old Jewish immigrant & mother of 3 children, on a bet, rode a bicycle around the world in 15 months, 1894-1895.

- To finance trip, she sold advertising space on her bicycle to the Lithia Londonderry Water Co. and adopted their name as her own for the journey.



Map of the World, Showing Route Traveled by Annie Londonderry.

Annie Cohen Kopchovsky ("Annie Londonderry")

Her 42-pound Columbia Lady's bicycle was too heavy to go long distances.

Her traditional women's clothes were unsuitable for this journey.

So, the Sterling Bicycle Co. gave her a much lighter **men's model** & she dressed first in bloomers & later, in a **man's riding suit** to pedal around the world.

Women's Suffrage

Bicycling gave women a start on rational dress, increased mobility, & a sense of autonomy.

The LAW magazine in 1898 wrote: "It has brought to women…freedom & independence that no amount of discussion regarding 'women's rights' would ever produce."

National Women's Suffrage Movement formed 1890.

Susan B. Anthony:
"Let me tell you what I think of bicycling… it has done more to emancipate women than anything else in the world."

Elizabeth Cady Stanton:
"Woman is riding to suffrage on the bicycle."

80 Years Later …

Local Bicycles

UNPACKING
history

Bicycle

This turn-of-the-last-century bicycle, donated by Louise Fenner Olinson, saw a good deal of the world and no doubt had some adventures before it came to the DeWitt Historical Society. Casper Fenner, brother of Louise, talked about his father's bicycle in 1990 and in a taped interview in 1995.

The Fenner family was of Swiss origin. They were early settlers in the Lake Ridge area. Leslie A. Fenner, the bicycle's principal owner, was born in 1868 and attended Cornell University, graduating in 1893. He belonged to the Banjo Club and several other organizations while earning his degree in mechanical engineering. He married Ruby A. Davis, daughter of Samuel Davis of Lansing.

Fenner found employment with the D. M. Osborn Company of Auburn, makers of the Osborn Reaper, a technological breakthrough in farming machinery. This was the parent company of International Harvester. Fenner took the bicycle with him and used it to get around when he traveled to England, Australia, New Zealand and Argentina as a representative of the company.

The bicycle features a large front wheel with spokes and pedals and has hard rubber tires. There is a much smaller rear wheel. A rider pushed the bike forward, placed one foot on a small support attached to the rear axle, and vaulted onto the seat, nearly 5 feet above the ground. A clasp brake on the right handlebar is not unlike those in use today. In the 1970s, the vented leather seat was replaced and the entire bicycle, which was rusty, received new nickel-plating before being displayed.

Because these bicycles easily pitched the rider forward onto the road whenever they encountered ruts, rocks or other obstacles, they were replaced by what were at first called Safety Bicycles, the kind with two wheels the same size.

Sources: Casper Fenner interviews,Cayuga Historical Society; Fenner Foster DeWitt Historical Society of Tompkins County; Bicycle History, from website of Pedaling History Bicycle Museum bicyclemuseum.com

The DeWitt Historical Society is unpacking thousands of artifacts in a two-year project to better archive its collection. You can witness the unpacking and view items from 10 a.m. to 5 p.m. every Tuesday through Saturday. In connection with this project, The Ithaca Journal features a newly unpacked object from the collection every Tuesday.

Our Historic Treasures
UNWRAPPED!

IJ 8/14/01

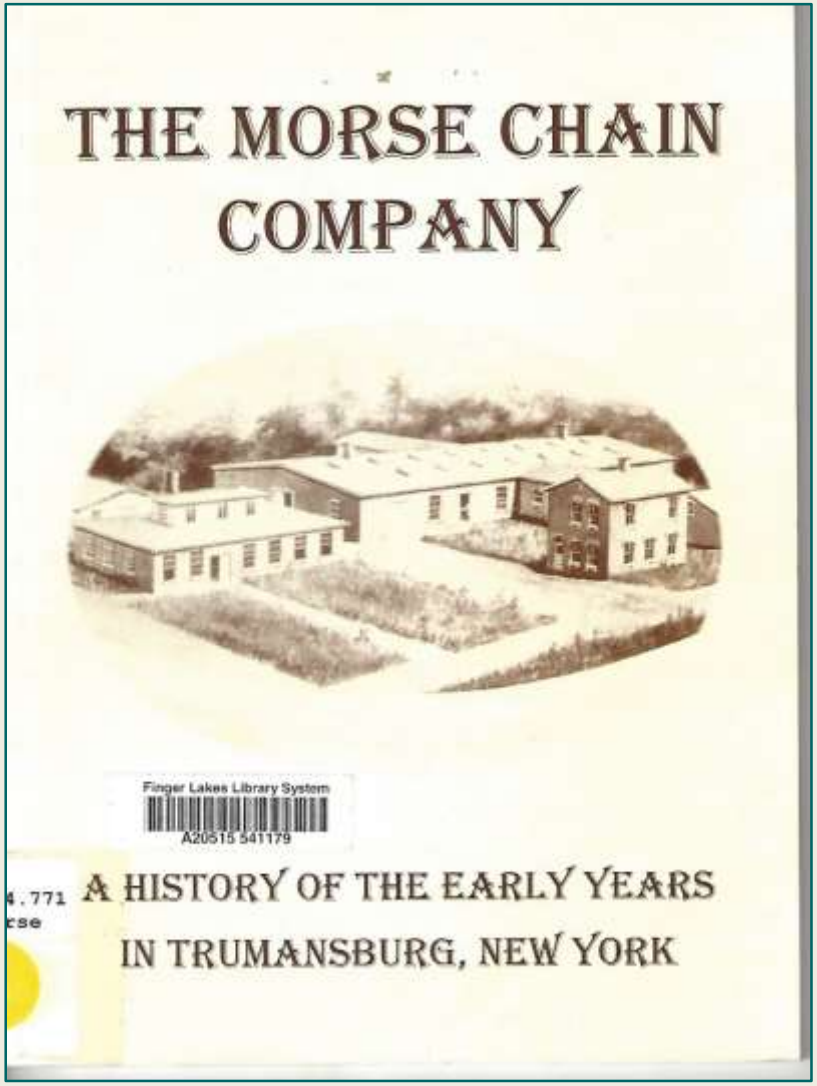
Bicycle Chains

Roller Joint Bicycle Chain

Manufactured by the Morse Spring Company (later Morse Chain) in Trumansburg NY, Starting in 1894.

Said to be a superior bicycle chain; many sold.

The company moved to Ithaca in 1906.



Inventions for Bicycle Aided Motorcycles, Automobiles, and Airplanes

The Wright Brothers were bicycle makers.

Ball bearings
Cable brake control
Chain drive
Differential drive
Differential gears
Free-wheeling mechanisms
Improvement in metals & machine tools & in engineering & production
Pneumatic tires
Rack and pinion steering
Shaft drive
Tubular steel
Variable speed transmission
Wire wheels
and the
Good roads movement

The bicycle, a phenomenon of the age of mechanization, can truthfully be said to constitute the most ingeniously simple, efficient, and economical means of transportation and recreation ever devised by man.

- Arthur J. Palmer

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The End