



Bicycles in Amesbury

by

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Amesbury Carriage Museum

Amesbury, Massachusetts

December 5, 2020

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The January 18, 1895, issue of the *Amesbury Daily News* reports that on display in the window of J. W. Creasey's Pharmacy on Market Square is "a model safety bicycle made by Geo. Knight[s] the local machinist for Doctor Cooper." The notice goes on to say, "It is one of the finest machines ever seen in this town." The bicycle craze was spreading, and not surprisingly, Amesbury adapted to the new reality, and mirrored the national rise and fall of the bicycle as a form of transportation. The design of the "safety bicycle," like the one that Knights built in 1895, was the culmination of developments that began in the mid 1860s with the introduction of the velocipede.

Velocipede

Arriving in the U. S. from France in 1865, the velocipede was a two-wheeled device with the pedals on the front wheel. In the early days of this technology, as is usual, there was great variety in the way the machines were made. Not surprisingly, there was much innovation among U.S. makers. The Price example (Figure 1) used a tubular frame and wire wheels with rubber inserts. The brakes were applied by leveraging against the handle bars to press down on the seat.¹

In February of 1869, as was happening in many New England cities², an entrepreneur set up a velocipede rink in the Tuttle's Hall of the American House hotel in Amesbury. The advertisement in the *Amesbury and Salisbury Villager* (Figure 2) offers instruction. The *Harper's* cartoon (Figure 3) is a caricature of a New York velocipede rink, but it does give us a sense of what might have happened.

Besides the invention of wire wheels, an important innovation that appeared in the velocipede was free wheeling. Some early velocipedes had foot rests on the front wheels because the pedals and the front wheel were connected directly so that if the wheel was turning so were the pedals. A mechanism like

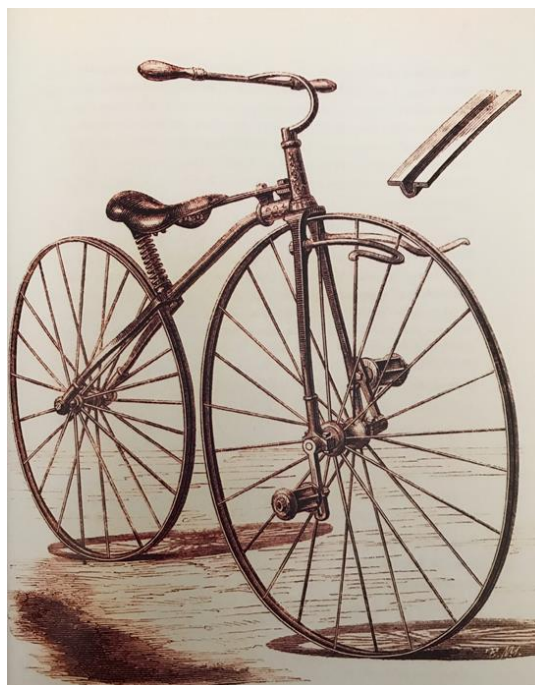


Figure 1: This illustration of "Price's Improved Bicycle," a velocipede with wire wheels, first appeared in *Scientific American* on June 12, 1869. The rubber "tire" would be inserted into the groove shown in the inset. Herlihy, *Bicycle*. 125.

the Van Arden freewheel from 1869 (Figure 4) is an overriding clutch so that if the rider stops peddling, the wheel continues to turn. The coaster brake, peddling backwards to stop the bicycle, comes much later.³

The velocipede fad did not last long. Due to a complex of physical, economic, and legal reasons, velocipede riding and purchasing never became widespread in the U. S.⁴ However, velocipede racing did catch on as a spectator sport, especially in Great Britain, and made its way across the ocean to the U.S.

The High Wheel or Ordinary Bicycle

The velocipede had the pedals on the front wheel. When racing bicycles became the rage, riders and bicycle designers discovered that enlarging the front wheel so that each turn of the pedals covered more ground increased speed. Eventually, the rider sat high off the

AMESBURY AND SALISBURY

VELOCIPEDE RINK

The above named Rink will open in the Hall connected with the AMERICAN HOUSE, on

Monday Evening, Feb 15, 1869.

A competent rider has been engaged and will be in attendance at all times to give instruction in the graceful and healthy exercise.

Everyone can learn how to ride the VELOCIPEDE, and it will undoubtedly become a great favorite in this country as soon as its advantages as a means of locomotion and a source of enjoyment are fully realized. A little practice is necessary, however, to make a swift and graceful rider.

Having just purchased five new machines, of superior make, I feel confident that I can afford the people of this vicinity a vast amount of pleasure for a little money.

Price of Admission, 15 cents.

J. M. W. CLEMENT

Amesbury, Feb. 11, 1869

Figure 2: Velocipede rink opening notice from *The Amesbury Salisbury Villager* for February 11, 1869, 3.



Figure 3: A Manhattan velocipede riding rink pictured in *Harper's Weekly*, February 13, 1869. (*The Granger Collection, N.Y., in Herlihy, 115.*)

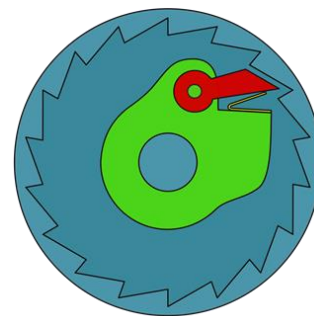


Figure 4: A ratcheting freewheel mechanism. When the gear turns clockwise, the red pawl engages the gear. When the gear moves faster than the central shaft, the pawl just clicks over the gear teeth ("freewheel").

The Safety Bicycle

In 1885, a bicycle innovation in England that quickly came to the U.S. would radically change the bicycle world—the Safety Bicycle. This is the chain driven bicycle that we are familiar with today. The chain drive meant that the dangerously high front drive wheel was no longer necessary. The propulsion and steering were separated from each other, and the potential mechanical advantage was greatly increased (Figure 7).

We have found no evidence of the manufacturing of velocipedes or high-wheeled bicycles in Amesbury, but once the safety bike appears, that all changes. In June of 1894 a special edition of the *Newburyport Daily News* featured descriptions of bicycles available and the agents who sold them, six in Newburyport and four in Amesbury⁸. All of the Newburyport sellers were only agents; three of the four in Amesbury manufactured bicycles themselves, one indication of Amesbury’s dense population of mechanics.

George L Knights (1848-1935), the builder of Dr. Cooper’s bike in the pharmacy window, is a good example. According to the *Amesbury City Directory* for 1882, Knights was a pattern maker, someone who created the patterns, often out of wood, that were used to form the sand molds for making cast iron objects. Aside from being a skilled woodworker, a pattern maker needed to understand how to break down the pattern into pieces that could be removed without disturbing the mold.⁹ By 1886, however, Knights is listed in the directory under the Business section as “Knights, George L. & Co. . . bicycles and tricycles.” He has one employee (F. R. Witcher) and the business is located in the Post Office Block. By 1891 he was at the rear of 87 Elm Street, in a building built out over Clarks Pond and previously occupied by the Amesbury and Salisbury Steam Laundry and the Tuxbury Brothers carriage body manufactory. He remained there until at least 1899.

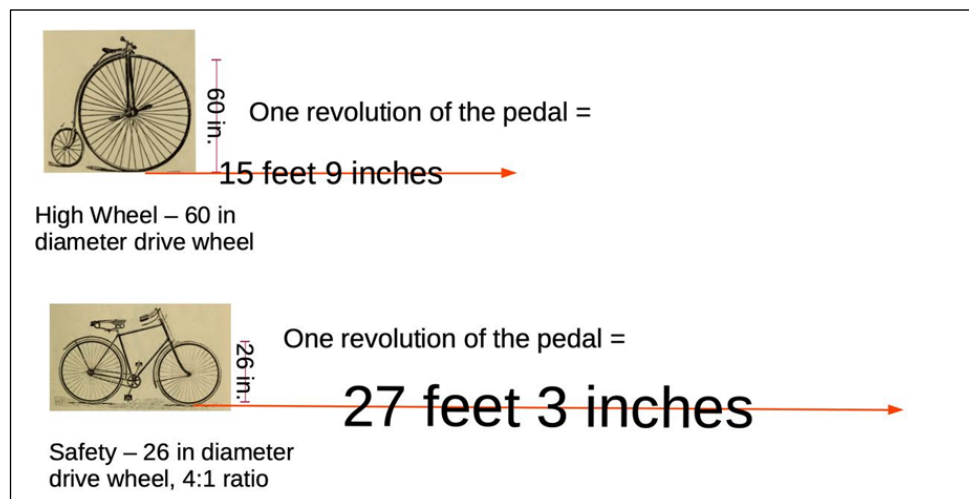


Figure 7: Efficiency of the safety bicycle, comparing distance traveled with one pedal revolution. (Murphy, Amesbury Carriage Museum. Illustrations: Schwalback and Wilcox, *The Modern Bicycle and Its Accessories*.)

In the 1892 Amesbury Directory, his resident entry says he is a bicycle repairer but his business entry is under “Bicycles.” Knights had been building bicycles on a small scale since about 1888, as he built Dr. Cooper’s fine bike, mentioned earlier, in January of 1895. However, by December of 1895, he is Superintendent of the Bicycle Department initiated then by the Amesbury Carriage Co. on the lower floor of Biddle and Smart’s No. 5 building. One of their advertisements (Figure 8) features the name “Geo. L. Knights, Supt. Bicycle Dept.” and begins, “This machine is built under the supervision of the best bicycle mechanic in the country.”

Though the Amesbury Bicycle is described in the June 1896 bicycle edition of the *Newburyport Daily News* as “a handsome wheel, one of the best finished on the market,” by December 1896, the Bicycle Division of the Amesbury Carriage Co. had been shut down. In January of 1897, the Eastern Cycle Co., which was to become the largest bicycle enterprise in Amesbury, purchased the space and machinery of the Bicycle Division¹⁰.

Incorporated in 1895, Eastern Cycle Co. started out manufacturing bicycles on the shore of Patten’s pond, begun with \$20,000 capital (\$620,000 in 2020). A brochure from the time promotes their Flying Yankee line, with “graceful proportions and lines” and “finished in black, maroon or green” (Figure 9). W. I. Atwood, of the Atwood Bros., who manufactured carriage and later bicycle and automobile lamps,

THE
“Amesbury Bicycle.”

**The Best Design, The Best Material,
The Best Workmanship, The Best
Finish of Any Bicycle on the
Market.**

This machine is built under the supervision of the best bicycle mechanic in the country. The secret in building a good bicycle is in knowing where the strength is needed, and not in putting heavy connections that really is a detriment to the other parts by bringing an unequal strain on the tubing (which is the lightest this year ever put into a machine.) Experience in constructing bicycles gained from 12 years of building and repairing all the different makes of wheels, we claim is a sufficient reason for the above claims for the “Amesbury.” We also have the largest and best bicycle repair department east of Boston. Machines re-enameled, re-pated and repaired in the best manner and at the lowest prices for first-class work. Also a full line of bicycle sundries carried in stock.

Amesbury Carriage Co.,

Geo. L. Knights, Supt. Bicycle Dept.

Agents wanted everywhere. If there is no agent in your town, write us direct. Send for catalogue.

was the treasurer.¹¹ Eastern outgrew its facilities and made the move to the Biddle and Smart building. In addition to the Amesbury Bicycle space on the first floor, which became the machine shop, they took additional space on the second floor “the Assembly Room and Repair department and showroom. . . . The Brazing Room is a separate one.”¹² That last area may be where they built the tubular frames. At one point they employed 100 people building and repairing bicycles. A. H. Atwood, another Atwood family member, was still the general manager in 1898, when Eastern went to the New York Bicycle Show¹³ where they showed their complete line of bicycles, eleven all together, including the Eastern Tandem (Figure 10).

In 1898 Amesbury folks could also buy bicycles at department stores like C.B. Aldrich, Chipman & Sons, and Wheelock’s (Figure 11), which also sold accessories. Note too, that Wheelock’s advertises a velocipede.

Figure 8: George Knights featured in Amesbury Carriage Co. advertisement in *Newburyport Daily News*, June 15, 1896, 3.

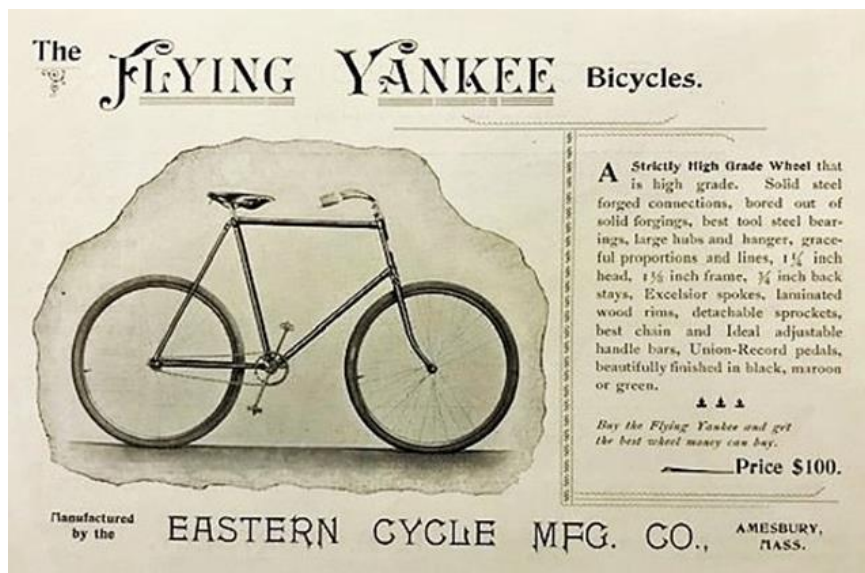



Figure 9: Flying Yankee bicycles featured on a page in an Eastern Cycle Manufacturing Co. brochure. (Amesbury Carriage Museum collection.)



Figure 10: 1896 Eastern Cycle advertising poster for the Flying Yankee line, the Eastern Tandem on the left. (Amesbury Carriage Museum collection.)

Wheelock's Bicycle Department.



Why pay one hundred dollars for a bicycle:
 The Lenox bicycles fulfill all the conditions for which they were designed. They are light, they are fast, they are strain proof.
 They were on exhibition at the show in Salem, and many orders were taken. Ladies' and Gent's \$35.
 We are agents for the Courtland Wheel Diana loaded with up to date ideas.

**WHEELOCK'S
BICYCLE SUNDRIES.**

Templar Bicycles \$45 You all know this Wheel. Our price for both Men's and Women's \$45.
 Swan Special \$49 Up-to-Date and embodies the latest improvements of a high grade wheel.
 Lenox Bicycles, built for business Ladies and Gent's \$55. Get our catalogue of specifications, free to all.
 Boy's and girl's bicycles. Wood rim and pneumatic tires, \$23, \$25, \$28. Here is your chance to be in it with the big boys.
 Velocipedes, large sizes, \$1.98, \$2.49.
 We can furnish you with the Crawford Wheel at cut prices.

Toe-clips 19c
 Magic Pocket Oil 10c
 2 ounce Bicycle Oil 5c
 4 ounce Bicycle Oil 10c
 Standard Cyclometer 89c
 Pants Guards 5c
 Sprocket Lock 25c
 Tire Tape 4c
 Bells 15c, 19c and 25c
 Rotary Bells 50c
 High grade bicycles Lenox bicycle \$55
 Swan Special \$49, also agent for the Diana Bicycle.

Figure 11: Wheelock advertisement from *Amesbury Daily News*, May 7, 1896, 1.

The history of Eastern Cycle is not clear at this point. On July 17, 1897, the Board of Directors of Eastern Cycle Manufacturing, because of "the static conditions of the bicycle trade throughout the country," decided that they could not continue profitably and voted to assign the company to E. Ripley Sibley, the president, and Alfred C. Webster to liquidate the company and distribute the net results to the stockholders.¹⁴ During August and September of 1897, Eastern Cycle ran ads for a bicycle auction that allowed Amesbury people to buy bikes that they were still finishing up before they were shipped out to other cities for auction¹⁵. But Eastern Cycle continues to appear as an entity—a theft in 1898¹⁶, a fire in the japanning oven in 1899¹⁷.

The 1898 City Directory for Amesbury shows four listings under bicycles (Figure 12) where bicycles were made and repaired and could also be purchased, and Eastern Cycle is still listed.

After the closing of the Amesbury Bicycle operation, Knights was again at his repair facility on Clarks Pond (Figure 13), and was selling Great Eastern bicycles and continued building his own. In March of 1898, he rented a showroom on Elm Street, "and has stocked it with new wheels of the Eastern Cycle Manufacturing Co."¹⁸ He even advertises 1898 models (Figure 14).

Bicycles, Etc.

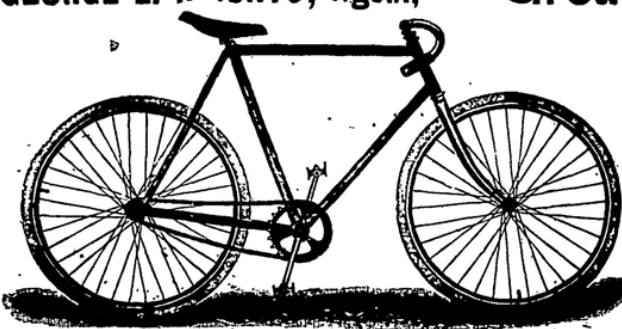
Bartlett S. Leonard, 27 Main
 Eastern Cycle Mfg. Co., Mechanics row (manufs.)
 Knights George L. rear 87 Elm
 Morrill Samuel, 53 Elm

Figure 12: Eastern Cycle Manufacturing Company still listed in 1898 *Amesbury City Directory*.



Figure 13: Knights' bicycle repair facility (circled) on the edge of Clark's Pond, shown on an 1899 Sanborn fire insurance map for Amesbury.

GEORGE L. KNIGHTS, Agent, Great Eastern
 1898 Models.
 Prices From **\$35 to \$75**



Also manufacturer of the
KNIGHT CYCLE

All kinds of Repairing in all its branches. Nickel Plating, and Enameling.

Warerooms, 72 Elm Street, Factory, Rear 87 Elm Street, Amesbury

Figure 14: George L. Knights' advertisement for 1898 bicycle models in the *Amesbury Daily News*, April 8, 1898, 3.

Small scale manufacturing bicycles in the late 19th century was similar to the early days of personal computers when local electronics stores would build computers for customers out of components. The 1898 ad for S. L. Bartlett (Figure 15), who also repairs bicycles, lists the brand-name, component parts of his Brunswick Bicycle. Notice that like the Flying Yankee it has wooden rims, but as an option it has a two-gear, rear wheel hub, an innovation developed in 1894¹⁹. As innovations developed, bicycle mechanics like Bartlett and Knights could upgrade bicycles. For example, Ricky LePlante of RayCo Machine in Amesbury owns an 1896 Women's Flying Yankee. That model bicycle did not have coaster brakes, and the rider stopped the bike by resisting the momentum in the pedals until it slowed to a stop. LaPlante's bike has a New Departure Coaster Brake manufactured by P & F Corbin after 1902.²⁰ That modification gave the rider both the ability to stop pedaling while the wheels continued to turn and the ability to stop by pedaling backwards, quite an improvement.

\$50.00. \$50.00. \$50.00.

The "Brunswick" Bicycle

Strictly High Grade and Up to Date in Every Particular.

Nothing but the Very Best Standard Goods enter into the Construct'io of these Wheels
 The "Fauber" one piece Cranks, "Shirk" Hubs, "Baldwin" Chains, "New Brunswick" Tires,
 "Kelly" Handle Bar, "Phenix Tube Co's" one-piece Front Fork and drop forged Steel Fork
 Crown, "Keene" non splittable Wood Rims, Best Seamless Tubing and Fittings, etc, etc,
 *The Brown-Lipe Gear Co.'s Two-Speed Gear, \$20.00 Extra.

MANUFACTURED BY—

S. L. Bartlett, AMESBURY, MASS

Repairing of all Kinds Promptly Attended to.

*Take your Wheels to Mr. Bartlett and have them re-enameled and repaired in a first
 class manner. Oak Street, near Electric Light Station.

Figure 15: S. L. Bartlett advertisement in *Amesbury Daily News*, March 10, 1898, 2.

Bicycles and "The New Woman"

The high wheel bicycle appealed young men who tore around the countryside in rowdy groups blowing bugles, but the safety bicycle opened up bicycle riding to women. The Eastern ad (Figure 10 on page 6) shows two men and two women. In an interview with Nellie Bly, Susan B. Anthony talked about the importance of bicycles to women:

"Yes, I'll tell you what I think of bicycling," she said, leaning forward and laying a hand on my arm. "I think it has done more to emancipate woman than any one thing in the world. I rejoice every time I see a woman ride by on a wheel. It gives her a feeling of self-reliance and independence the moment she takes her seat; and away she goes, the picture of untrammelled womanhood."²¹

This 1895 ad (Figure 16) from the *Amesbury Daily News* for Columbia Bicycles looks at first like it is for a men's bike and a woman's bike, but the text explains that the Model 42, with the cross bar, "has been especially designed for the many ladies who prefer to wear knickerbockers rather than cumbersome skirts." The skirts women wore in the late 1890s made bicycle riding challenging, and so fashions adapted. This graphic from a *Newburyport Daily News* special bicycle edition (Figure 17) displays and comments on the range of bicycle apparel. The figure on the upper right is labeled "The Usual Thing"; the upper left figure in knickerbockers is labeled "Attracts Attention." Many of the ads for bicycles in the Amesbury papers featured bicycles intended for women.

A notice in the *Amesbury Daily News* for July 1, 1895, advertises, a "Run to Salisbury Beach this Monday evening. Leave Market Square at 7 PM return by moonlight. All invited, ladies especially." There is no report of whether any ladies responded, but a story in the August 21, 1895, edition reported that 25 members of the club went to Exeter, NH for the parade, and, "Four ladies went with the party," so we know that at least some women in Amesbury were riding. And advertisements in the *Amesbury Daily News*, like the Mitchell's advertisement (Figure 18), shows there was some demand for clothes suitable for bicycle riding.

The advertisement is enclosed in a decorative border and is divided into several sections. At the top left, a bicycle is shown with the price "\$100" on either side. Below it is the text "MODEL 41 COLUMBIA". To the right of this, the slogan "COLUMBIAS—They almost fly." is written. The main title "Bicycling for Women" is prominently displayed in the upper right. Below the title, a paragraph states: "Physicians recommend bicycling. Dame Fashion says it is 'good form.' Two new models for women's use in". This is followed by the brand name "Columbia Bicycles." in a large, bold font. Below this, a paragraph describes "Model 42 Columbia" as being especially designed for ladies who prefer knickerbockers over skirts. It also lists "Ladies' wheels also in Hartford Bicycles at lower prices—\$80, \$60, \$50." To the right of this text is a small illustration of a woman in a long dress standing next to a bicycle. At the bottom left, another bicycle is shown with the price "\$100" on either side, labeled "MODEL 42 COLUMBIA". To the right of this is the company name "POPE MFG. CO." and a list of general offices and factories in Boston, New York, Chicago, San Francisco, Providence, and Buffalo. At the very bottom, there are two lines of promotional text: "Send for Catalogue. Free at any Columbia Agency, or by mail for two 2-cent stamps." and "Six handsome Paper Dolls, showing ladies' bicycle costumes by noted designers, mailed for five 2-cent stamps."

Figure 16: "Bicycling for Women" advertisement, *Amesbury Daily News*, Saturday, May 15, 1895, 4.

The Bicycle Bust

It is hard to overestimate what a big thing the bicycle was going into 1897. The “wheel” as they were also called enabled men and women, mostly young, to travel distances conveniently and independently without a horse and carriage. With the railroad for long distances and the bicycle for short distances, the world seemed to be opening up. However, bicycles were expensive. In 1898 an inexpensive bicycle could cost \$35, which is about \$1,000 in 2020 dollars, so not everyone could afford one, and 1897 would turn out to be the year that the novelty of the bicycle for recreation wore off, so that just as Amesbury was beginning to invest in making bicycles, the industry was about to shrink radically.²² In addition, as with carriages, the midwest was scaling up and building large production-line facilities to produce cheaper products²³.

As we have seen, the Amesbury Carriage Co. discontinued its bicycle department in September of 1896 and sold its equipment and gave up its space in the Biddle and Smart building to Eastern in January of 1897. Though in April of 1900, Eastern Cycle is advertising, once again, a gone-out-of-business auction of 15 completed bicycles and a number of incomplete ones²⁴, we saw that company structure collapsed in 1897, and it is unclear in what form it carried on. In August the *Amesbury Daily News*, under the title “Financial Troubles,” reported that “George L. Knights, bicycle dealer, is a petitioner in bankruptcy.”²⁵ By 1906, in *The New England Gazetteer* for that year, the business directory for Amesbury under “Bicycle Dealers and Repairers,” lists only S. D. Morrill & Co.²⁶ What ultimately doomed the bicycle was the automobile, and as carriages declined, of course, Amesbury moved into auto body production.

Amesbury Adaptability

The history of bicycles in Amesbury reflects what happened on the national level, but recounting that history reminds us of how that history took shape in Amesbury. We noted the difference between Newburyport’s bicycle sellers and Amesbury’s, that in 1896 most of Amesbury’s were also makers and none of Newburyport’s were. The career of George L. Knights, a skilled craftsman, showed him working as a pattern maker, riding bicycles and becoming involved in the Amesbury Bicycle Club, opening a repair shop and building on a small scale, becoming superintendent of a large manufacturing operation, becoming an agent for the company that took over the one he worked for, and finally, filing for bankruptcy when the bottom fell out of the market. Knights shows up in the news again in 1914, when arriving for work as a pattern maker at the Pettingell Machine Co., he discovers a fire in a Cadillac in the garage. Between 1907 and 1917, while working for Pettingell, he invents five devices that receive patents, including one for a machine that cuts and molds sheet metal for carriage and auto bodies (Figure 19).

George Knights personifies the spirit of Amesbury, willing to try something new, able to use skills to fix and improve the machinery of daily life, and able to bounce back from setbacks. In Amesbury, Knights was able to find a place to be the kind of person he was.

One other aspect of the bicycle in Amesbury is worth noting. Some important technology that eased the transition from carriages to automobile came by way of the bicycle. An article reprinted by the May 13, 1896, *Newburyport News* from the *Salem News*, describes a carriage that was “peculiar” and attracted attention on its streets. “It was a genuine bicycle buggy,” it notes, manufactured in Chicago and one of six in New England, four of which are “in the process of completion at the agent’s shop in Amesbury.” Its wheels have “the ordinary pattern used on a safety bicycle equipped with tangent spokes and pneumatic tires.” (Other carriage makers would eventually adopt bicycle-type wheels, shown in Figure 20.) The “bicycle buggy” undercarriage is made of steel tubing “like the frame of a bicycle, and the joints are brazed,” and the vehicle is equipped with ball bearings.

At this point we don’t know who in particular was involved, but we do know that D. J. Marston’s wheel company in Amesbury and Chicago Screw Co., which made ball bearings in Chicago, did form a joint venture²⁷. When experience with chains and gears is added to the mechanic’s skill set, it is not a big leap to think of bolting on a motor of some kind.

Knights and his contemporaries lived through a time of transition. We tend to see progress as an arrow pointing unerringly toward the future, but what actually happens is sloppier. And it takes people willing to bounce around some to discover that putting pneumatic tires on a vehicle makes things go a little smoother.

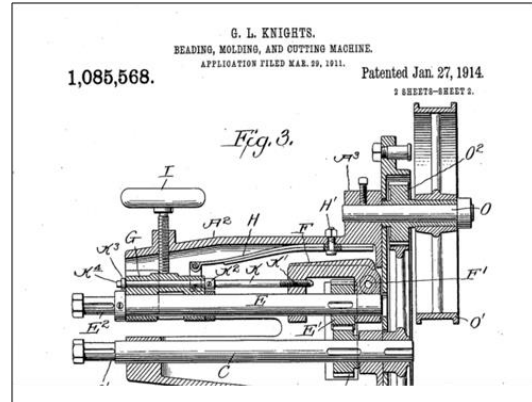


Figure 19: Knights’ “beading, molding and cutting machine.” Knights describes it as a “simple and efficient machine by means of which molding and beading can be quickly and easily formed in sheet metal” for automobile and carriage metal body work.



Figure 20: A later example of a carriage with bicycle-type wheels being built at Connors Carriage Co. workshop in Amesbury. (Amesbury Carriage Museum Collection.)

Notes

- 1 Herlihy 124-125.
- 2 Herlihy 113.
- 3 Herlihy 293, 311.
- 4 Herlihy 125-126.
- 5 Amesbury and Salisbury Villager [A&SV] (July 10, 1884) 5.
- 6 A&SV (August 21, 1884) 5.
- 7 "A 'Cyclers Argument."
- 8 "Bicycle Number of the Newburyport Daily News."
- 9 "Patternmaker."
- 10 Massachusetts, Public Documents of Massachusetts (1898) 203.
- 11 The Newburyport and Amesbury Directory, Including Business Directory, Street Directory, Official Record, Etc. (1898).
- 12 Amesbury Daily News [ADN] (February 17, 1897) 2.
- 13 ADN (February 17, 1897) 2.
- 14 "Made An Assignment: The Eastern Cycle Co. to Liquidate Their Business."
- 15 See ADN (August 20, 1897 to September 20, 1897).
- 16 ADN (July 22, 1898).
- 17 ADN (April 18, 1899).
- 18 ADN (March 17, 1898) 2
- 19 Lipe and Brown, Changeable gear.
- 20 "Corbin & New Departure Hub Dating Project."
- 21 Ida Husted Harper, The Life and Work of Susan B. Anthony 859.
- 22 Herlihy 282-283.
- 23 Herlihy 281.
- 24 ADN (April 11, 1900).
- 25 ADN (August 2, 1900).
- 26 The New England Business Directory and Gazetteer 1906 474.
- 27 Harrold, "The Amesbury Vehicle."

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