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# The Velocipede Craze in Maine

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In early 1869, when the nation experienced its first bicycle craze, Maine was among the hardest-hit regions. Portland boasted one of the first and largest manufactories, and indoor rinks proliferated statewide in frenzied anticipation of the dawning "era of road travel." In this article, the author traces the movement in Maine within an international context and tackles the fundamental riddle: Why was the craze so intense, and yet so brief? He challenges the conventional explanation – that technical inadequacies doomed the machine – and cites economic obstacles: in particular, the unreasonable royalty demands imposed by Maine-born patent-holder Calvin Witty. David V. Herlihy holds a B.A. in the history of science from Harvard University. A specialist on bicycle history, he is a free-lance writer based in Boston. His works have appeared in a number of noted magazines, and he is currently preparing a book on Pierre Lallement and the invention of the bicycle.

In 1869 the United States experienced its first bicycle craze. "Never before in the history of manufactures in this country," marveled *The New York Times*, "has there arisen such a demand for an article."<sup>1</sup> Although the movement proved brief, it merits serious study. Not only does it offer a valuable glimpse into post-Civil War American life, it represents an important step toward practical road transportation.



Pierre Lallement, a young mechanic, introduced his new velocipede in Paris in 1863. Although crude by modern standards, these first bicycles were considered speedy, compact, and dashing, and they opened a door to developing a practical means of personal transportation. The new vehicle found fertile ground in Maine in 1868-1869, with Portland boasting one of the nation's first and largest velocipede manufacturers. *Photo from The Cycle [Bostox, July 2, 1886], courtesy Lallement Memorial Fund Drive and the author.* 

The subject is particularly pertinent to Maine, where the new vehicle found fertile ground. Portland boasted one of the nation's first and largest "velocipede" manufactories. Rinks proliferated statewide, and some of the most prominent velocipedists were "Down Easters," including patent mogul Calvin Witty. A short-lived paper in Bangor carried the catchy title *The Velocipede*.<sup>2</sup> The history of the velocipede in Maine underscores an important point: although the premature demise of the American bicycle is generally blamed on technological shortcomings, the greater culprits were social and economic factors. In particular, Witty's excessive patent demands virtually doomed the fledgling industry.

## The Bicycle Takes Off in France

In the summer of 1867, at the Universal Exhibition in Paris, the world first took note of a curious new two-wheeler with pedals attached directly to its front axle. This relatively compact vehicle, with its solid iron frame and wooden carriage wheels, typically weighed about seventy pounds. American visitors were among the first to react to the new industry. In an article titled "A Revolution in Locomotion," the Paris correspondent of *The New York Times* remarked: "The experts in this new and cheap mode of locomotion make twelve miles an hour, and a greater speed will be attained....So let us have the velocipede."<sup>3</sup>

Actually, the bicycle had already arrived in the United States, although it had yet to make any real impact. Pierre Lallement, the young mechanic who introduced the idea in Paris in 1863, emigrated two years later to Ansonia, Connecticut, with a specimen in tow. In spring 1866 he demonstrated his machine in New Haven. An observant journalist noted: "An enterprising individual propelled himself about the Green last evening, on a curious frame sustained by two wheels, one before the other, and driven by foot cranks."<sup>4</sup> Alas, Lallement's bold bid to jump-start an industry fizzled. Although he secured a patent with an investor, James Carroll, the hapless pair failed to enlist a manufacturer. In early 1868, a dejected Lallement retreated to France, apparently convinced that the bicycle had no future in America.<sup>5</sup>

Only a few months later, however, Americans began to receive detailed reports from abroad describing the rapid rise of the French velocipede. By spring 1868 it was already a common sight in Paris, and on May 31, the first official bicycle races took place in the park at nearby Saint Cloud. Although the contestants were few and the distances short, the novel event generated international attention. By summer several clubs for gentlemen riders were operating across France, and the press regularly cited successful long distance bicycle rides.<sup>6</sup>

## The Craze Spreads to America

Before long, Americans were treated to their first real glimpse of the French novelty. In August 1868 the Hanlon brothers demonstrated their patented bicycle on a Boston stage to enthusiastic crowds.<sup>7</sup> For the next several months, this celebrated acrobatic troupe gave similar performances across the country, helping to whip up considerable popular interest in the bicycle.

Prospective American makers nonetheless hesitated to undertake its production. The proposition was a costly one, and many feared that "the excitement may die out before they can get profitably at it."<sup>8</sup> A few firms imported specimens for study, but most were content to await further developments in France. Would the velocipede prove a serious vehicle there, or simply another "nine day wonder?" By fall, its fate abroad seemed settled, at least for the near future. Led by the pioneer Michaux firm, the new industry continued to make impressive inroads and emerged as an important branch of French coach-making. Michaux alone employed 250 workers, who turned out a dozen machines per day.<sup>9</sup> No longer were human-powered vehicles strictly for the amusement of children.

firms in the New York City area scrambled to unveil models of their own, which they claimed were superior to the original French design. On November 11, the New York Athletic Club gave an indoor cycling exhibition. Shortly thereafter, velocipedes began to appear in Central Park.<sup>10</sup> Starting in early December, the first riding schools opened in Manhattan, draw-

ing some of its most prominent citizens. Makers were besieged with demands beyond their capacity to produce. With a national craze looming, Winslow Homer aptly depicted the year 1869 arriving on a velocipede.<sup>11</sup>

Indeed, barely a month into the new year, the fad was spreading up the coast and across the nation. Its chief manifestation was the ubiquitous "velocipede rink," a converted hall where the paying public could experience the French marvel first-hand. The size of their fleets ranged from one or two machines to several dozen.<sup>12</sup> Ostensibly, those who came to tame the "fiery steed" were preparing themselves for outdoor riding come spring.

What exactly the bicycle craze would come to was a matter of conjecture. A specimen highlighting the Mechanics' Fair in Hartford in mid-January was hailed by some as a "poor man's carriage," yet dismissed by others as a "rich man's toy."<sup>13</sup> The preacher Henry Ward Beacher predicted that his entire congregation would soon be cycling to Plymouth Church in Brooklyn.<sup>14</sup> One journal, vowing to keep an open mind, nonetheless cautioned: "As a toy, [the bicycle] cannot be long lived; it must be turned to practical account, or it will not remain long in use."<sup>15</sup>

Whether women would – or should – take to it was yet another intriguing issue. Susan B. Anthony's *Revolution* took a favorable view, predicting that the bicycle would eventually prove beneficial to women of all classes: "The fashion-worshiping and theatre-going women and ladies will easily overcome all delicate scruples about the manner of riding, and soon conduct the whole sex into what will become a graceful, healthful, and useful exercise."<sup>16</sup> Others evidently shared this vision. Numerous rinks offered lessons for "ladies only," and at least one maker introduced a special women's model with a low-flung frame and a raised wicker seat. One journal described how to make a button-down dress "suitable for either riding or walking."<sup>17</sup> In general, confidence ran high that Yankee ingenuity would soon transform the clumsy and costly bicycle into something truly practical and affordable. The perfected product would serve not only for healthful exercise but also for cheap transportation – a

boon to those who could not afford a horse. In effect, the rinks were slated to usher in a glorious new "era of road travel."<sup>18</sup>

# The Bicycle Arrives in Maine

By early 1869, Mainers were well-braced for the arrival of the velocipede. A few had witnessed the Hanlon bicycle the previous fall, and many knew that a veritable craze had already struck New York. The question of the hour was hardly *if* the bicycle would make its presence felt in Maine, but *when*. That moment was not long in coming. In late January, C. P. Kimball & Larkin, a prominent manufacturer of carriages and sleighs in Portland, announced it would commence velocipede production, starting with a batch of fifty. It planned to offer a variety of styles of the highest quality, at a price ranging from \$50 to \$150. In the meantime, it displayed two New York-made machines at its factory on Preble Street, which immediately drew hundreds of curious visitors.<sup>19</sup>

Shortly thereafter, Kimball & Larkin opened the first velocipede rink in Maine, on their premises. Those who purchased a machine were entitled to free instruction, while renters were charged \$3 or \$5 for five or ten lessons, respectively. The demand was so intense the firm had to establish time slots. The general public could visit between 8 AM and 10 PM, except when private lessons were in session. A portion of the lessons were reserved for ladies and their escorts.<sup>20</sup> In mid-February the firm opened its second rink at Mechanics' Hall. Meanwhile, several local entrepreneurs had hastily assembled rinks of their own. All were well attended at first, with patrons generally paying between 40 and 60 cents an hour either to ride or to observe the new vehicle.<sup>21</sup>

Despite this outpouring of enthusiasm, the local press remained sharply divided on the bicycle's long-term prospects. One newspaper gushed, "It is really a wonderful thing, and will, we predict, supersede most other kinds of out-of-door sports for exercise and even for travel on smooth, level roads."<sup>22</sup> It later remarked on the bicycle's broad appeal: "This wonderful machine continues to attract the attention of all parties old and

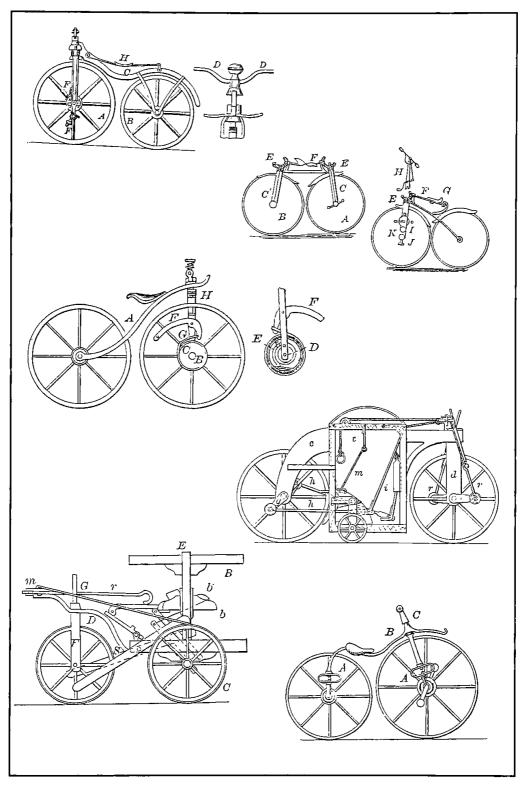
young, male and female."<sup>23</sup> But others were more skeptical. Citing the short-lived Draisine of 1819 (a kick-propelled twowheeler), one paper dismissed the bicycle as silly and futile.<sup>24</sup> In general, however, the press treated the "mechanical horse" with cautious optimism, urging that it be given a fair trial. Indeed, with demand surging and rinks flourishing, the future of the velocipede already seemed reasonably secure. The furor would inevitably subside, but the bicycle would surely outlast it by establishing at least a modest market niche.

## **Patent Problems Erupt**

The public had become so enamored of the velocipede it barely noticed a stunning development in late January that threatened to curtail production. Calvin Witty, a carriage maker in Brooklyn but originally from Maine's Aroostook County, announced his acquisition of the dormant Lallement Patent. This "live Yankee," as one local newspaper described him, asserted exclusive rights to velocipede manufacture.<sup>25</sup> He demanded a staggering \$10 in licensing fees per machine retroactively applied to the thousands already made.

How had Witty come across this windfall? He learned of the Lallement Patent some months after he had started producing bicycles for the Hanlon brothers.<sup>26</sup> The *Eastern Argus* of Portland sketched the full story:

[Lallement] made a machine at New Haven, Connecticut, and in connection with a citizen of that place obtained a patent November 20th, 1866. The people took no notice of it, and he returned to France, and the matter there rested. In the meantime the popularity of the new velocipede rose in France, and thousands were made in the summer of 1868....During the past fall [1868] a large number of persons in different parts of the United States, commenced their manufacture. It being understood that it was a French invention, no one supposed there was or would be any patent on it in this country, but they were doomed



Lallement's original U.S. Patent, 1866, with a selection of American patents registered during the early months of the craze: R.H. Plass (New York, March 1969); J. Simpson (Newark, Ohio, May 1969); P.C. Rowe (Boston, May 1969); W. Frankel (June 1969); G.C. Buell (New Haven, Connecticut, June 1969). U.S. Patent Office.

to sudden disappointment. Some time in January last, the owner of one-half the patent, now living in New Haven, told his employers he had a patent on velocipedes. This fact they communicated to Mr. Calvin Witty, one of the smartest businessmen of New York City....Witty was not slow in seeing Mr. Carroll, and purchasing his entire interest. He then by telegraph sought out the French inventor, then in Paris, and through agents there purchased his interest thus becoming the sole owner of the patent for the United States.<sup>27</sup>

Witty himself would later give additional details of the transaction. In all, he spent about ten thousand dollars for the patent, including several thousand to research its validity and a like sum paid directly to Lallement. But this sizable investment paid off handsomely. Within weeks of his announcement, he had already collected \$30,000 to \$40,000 in retroactive royalties. He reportedly refused an offer to resell it for a tidy \$75,000.<sup>28</sup>

Witty's chilling decree threw the nascent industry into turmoil. A New York paper reported that "some of the Newark firms engaged in making velocipedes, and one or two of the New York firms, have concluded to suspend operations until the validity and ownership of the claim are established, or the contrary. Other makers declare their readiness and ability to contest the patent."<sup>29</sup> For its part, Kimball & Larkin wasted no time investigating Witty's claim. The *Eastern Argus* recounted:

> Our enterprising carriage manufacturers Messrs. C. P. Kimball & Larkin received notice Saturday noon [January 28], took counsel on its validity and concluded it was valid, and at 6 o'clock the same afternoon Mr. Kimball was on his way to New York, arriving there at 4 A.M. Monday, and secured the exclusive right to manufacture in the State of Maine and sell throughout the United States....The friends of this firm take much pride in the fact that they procured the very first license granted in the United States.<sup>30</sup>

Several of the leading makers hastily formed a trade group to look into the Witty claim, and reluctantly concurred that it was valid.<sup>31</sup> Dozens of manufacturers across the country, following the lead of Kimball & Larkin, settled with Witty. But many grumbled about his harsh terms and held out hope for eventual relief.

A French newspaper based in New York City, *Le Courrier des Etas-Unis*, took an interest in the matter. Evidence from France that Lallement was not the original inventor could void his patent. Alas, it offered the following assessment:

Rather than rushing into production to make as many velocipedes as possible, as his colleagues had done, [Witty] quietly went about acquiring the exclusive right of manufacture. He contacted the inventor, M. Pierre Lallement of Paris, assured himself that the latter had taken out a valid patent, and then bought it....We are familiar with all the details of this case, because we know that many of our compatriots have recently arrived in the United States with the intention of making this popular toy. They should know that they have to deal with Mr. Witty first....The monopoly Witty purchased belongs to him; he bought it, there is nothing more to say. The consequences of this legal situation are: from Mr. Witty's point of view, the certainty of growing richer, from the public's point of view, the certainty of continuing to pay a premium for bicycles.<sup>32</sup>

Indeed, Witty's significant surcharge added to the already prohibitive cost of producing a top quality machine. At Kimball & Larkin, the price of the cheapest model first rose to \$80, and then to \$100. A New York paper confirmed that other licensees had passed on similar price increases. Many grumbled that the American machines were easily twice the price of their French counterparts.<sup>33</sup>

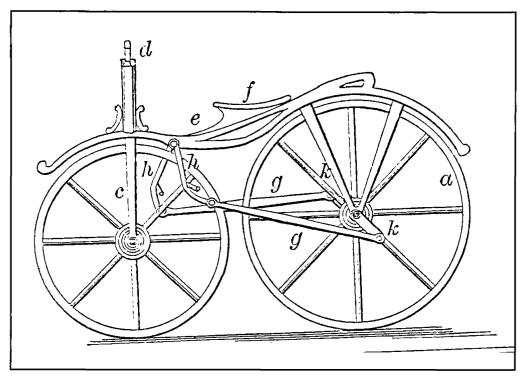
Despite the inflated prices, it seemed the robust movement could weather any challenge – even Witty's hefty demands.

Popular interest merely intensified throughout the month of February. The movement acquired its own journal, *The Velocipedist*, and nearly every American city, and many towns, inaugurated at least one velocipede rink. Maine cities were by no means exempted from the craze. Augusta alone opened two rinks in rapid succession. The outlook was especially bright in Portland. By early March, Kimball & Larkin had doubled its initial allocation of workers assigned to velocipede production. One hundred fifty were now turning out a hundred bicycles per week. Despite the winter weather, the public's interest continued to grow. Another six or eight rinks sprouted up in buildings ranging from abandoned churches to military halls.<sup>34</sup>

Rink entertainment helped sustain the public's interest through the inclement weather. For a relatively modest fee, one could enjoy an animated evening of two-wheeled performances featuring stunt riding and "slow" races: comical contests to see who could bicycle the slowest without falling down. The highlight, however, was invariably a race around the main circuit among a handful of contestants. These heated affairs allowed local sportsmen to show off their athletic prowess and even capture a prize or two. They also offered manufacturers a valuable forum to develop much-needed material improvements.

On March 3, one of the most notable races took place in Portland, marking the opening of a new rink at the Portland & Rochester depot.<sup>35</sup> The Forest City Band supplied background entertainment to a boisterous capacity crowd of about a thousand. The twenty racers competed in half-mile heats – four times around the track – riding Kimball & Larkin machines. John Crowley took first place and the silver cup, registering a time of 1:40. The runner-up, John Kennedy, trailed by a mere quarter second. The slowest time was just over two minutes.

One observer went away thoroughly impressed: "The Velocipede is fast displacing other muscular amusements in this city. Billiards are almost forgotten, base-ball promises to be laid on the shelf the coming season." Yet when it seemed the movement had overcome its patent woes and achieved a modi-



Calvin Witty's Patent (Brooklyn, March 1869). U.S. Patent Office.

cum of stability, new obstacles arose. In March, the Hanlon brothers reissued their original 1868 patent to cover the following improvements: the forked frame, an adjustable saddle and crank, a mud guard, and a brake.<sup>36</sup> They, too, sought patent royalties from all manufacturers.

The *New York Sun* conceded that these improvements were "in use in every velocipede" but urged the Hanlons to be liberal with their terms: "If their price should be as high as that fixed by Mr. Witty, the making of velocipedes will be checked if not stopped altogether. The payment of \$20 for patent rights upon each machine would destroy the business pretty effectually. Indeed, \$10 is quite as much as it can stand."<sup>37</sup> Once the Hanlons set their price at \$5, the paper predicted they would fare better at collecting than Witty, whom it deemed altogether "too grasping." The paper urged Witty to reduce his fee to a like sum, but he refused. Nor did he take out a license with the Hanlons to cover his own production. Their agent subsequently filed suit.<sup>38</sup>

Meanwhile, yet another claimant entered the fray. A certain Stephen W. Smith insisted that he, not Witty, held the basic bicycle patent. Witty denounced his claim as "unqualifiedly false," but Smith vowed to resolve the matter in court. The *New York Carriage Journal*, for one, gloated over Witty's legal troubles: "If Witty's prospecting proves unsuccessful, who will pity him?"<sup>39</sup>

In point of fact, however, Smith's patent simply covered a child's rocking horse. The *New York Sun* observed: "It has about as much applicability to velocipedes as it has to railroad locomotives." Yet the cunning Smith baited makers by substantially undercutting Witty – offering licenses for a relatively modest \$3-5 per machine. He simultaneously followed through on his threat to seek an injunction against Witty and attacked a few of his licensees as well.<sup>40</sup> This antagonistic situation took a heavy toll on beleaguered makers. One New York correspondent noted that it was "wonderful how the mania grows with the approach of spring....The makers are crowded with orders, and but for the vexatious patents that hang over them they would do a thriving business."<sup>41</sup>

The nascent industry thus found itself sliding into legal chaos precisely when it needed to devise and implement vital improvements. The makers were particularly irked by Witty's relentless demands. In May, a New York paper reported that the "leading manufacturers have taken the war path against 'Royalty Witty.'" In response, Witty simply "engaged a dozen additional lawyers to defend his so-called 'rights.'"<sup>42</sup> As prospects for profitable returns dimmed, the pace of experimentation slowed. In early May, the *American Artisan*, long an ardent exponent of velocipedes, lamented: "The production of striking novelties in this line [has] fallen off to a very appreciable degree."<sup>43</sup>

Skeptics of the bicycle, who had been keeping a fairly low profile, were now gleefully predicting its imminent demise. Chortled the *New York World*: "It is discovered that the velocipede – be it a bicycle, tricycle or icycle – is nothing but a toy; a pretty plaything, possibly, for boys, but a most impracticable and useless thing for men. The best run which the velocipede can now make is to run itself into the ground."<sup>44</sup>

The deteriorating state of affairs hampered rinks as well. By April, a number had folded, and many of those remaining were in peril. Some even engendered outright hostility. In Amherst, Massachusetts, a group demanded that a local rink be closed on account of its ill repute. In Bridgeport, Connecticut, a velocipede hall below a courtroom regularly disrupted proceedings, prompting irritated sheriffs to order the machines stopped. A Portland paper complained about the "bother" of velocipedes and about the "trouble and noise they make."<sup>45</sup>

Not even indoor racing, once a great attraction, proved of lasting appeal. Contests were often marred by nasty spills due to poor surfaces, cramped riding conditions, and inferior machines. With little evidence that the spectacle was improving, the public gradually lost interest in indoor competition. Desperate rink managers sought to revive enthusiasm by focusing on flashy exhibitions. These included games of tag, obstacle courses, highwire acts, and other acrobatic feats on the bicycle.<sup>46</sup> Women performers, such as the former "skatatorial queen" Carrie Moore, became especially popular. A Portland paper gave this account of her dazzling performance in early April:

> Ms. Moore was attired in blue velvet, embroidered in gold, loose trousers of same reaching the knee, white tights, high bronze boots, and blue velvet cap with white feather. She is tall, of pleasing appearance, with a wealth of blonde hair and performs feats upon her bicycle hardly to be imagined. Her balancing on one foot in the saddle, and standing on the treadles of the driving wheel and propelling the machine while a gentleman sits in the saddle and steers, are really wonderful displays of agility, strength, and maintaining one's equilibrium.<sup>47</sup>

Though some exhibits of female velocipeding were well received, others provoked controversy. After a rink in New York City touted "French female riders attired in tights," the *New York Times* scoffed that the act was "introduced merely to gratify the prurient tastes of the sensualists." It warned that such perfor-

mances jeopardized the movement.<sup>48</sup> The *New York Sun* decried the trend "to lower the standard of bicycle entertainments even to the level of common shows and exhibitions in which the aim is to attract the largest multitude, irrespective of the character of the assemblages." Although leading velocipede makers denounced such "Black Crook" performances, the damage was done.<sup>49</sup> Some rink racers began to use aliases, as if to protect their good names. "Why they assume these sobriquets we cannot tell," protested the *New York Sun*, "there being nothing to be ashamed of in velocipede riding, except in made-up races or Black Crook riding."<sup>50</sup>

As warm weather finally set in, only one hope remained to salvage the besieged American bicycle. It would have to deliver promptly on its *raison d'etre*: practical road travel. Ready or not, it had to prove itself a vehicle of some value to check its slide and revive flagging interest. A moment of truth was thus at hand.

To be sure, some "eager-beavers" had already tested the waters, even before the snow had fully cleared. As early as February, a Portland paper spotted such a creature:

> The quiet which has reigned on Commercial Street for the past few days was broken Monday afternoon by the appearance of a velocipedist. Owing to the slippery spots on the sidewalk the machine didn't work very well. The intrepid rider met with a tumble into the slosh on the corner of Union and Commercial streets, and also ran into a horse, startling that quiet animal and frightening another one. Merchants, clerks and laborers all gathered in force to see how the bicycle would work on the street.<sup>51</sup>

A week later, the same paper reported more bicycle sightings: "As the sidewalks become clear of snow, velocipedes begin to make their appearance in the streets. Two or three were trundling about town yesterday, and wherever they went, foot persons were compelled to scatter, or come to grief." The writer was especially critical of a young cyclist on Congress Street who allegedly approached a group of ladies from behind, and then "sung out rudely to them to 'clear the road.""<sup>52</sup>

With spring finally upon them, loyal velocipedists were set to descend *en masse*. The results, alas, were still disappointing, if not outright disastrous. Newspapers began to report numerous velocipede-related accidents, often with torn ligaments or other serious injuries. Moreover, pedestrians complained bitterly about road-wary bicyclists monopolizing smooth sidewalks, prompting a flurry of restrictive ordinances.<sup>53</sup> Increasingly, the velocipede was branded an intolerable nuisance.

Even expert bicyclists failed to stem the growing backlash. Bangor, for example, hosted a rare and well-attended outdoor velocipede race as part of its 4th of July festivities. But the affair drew only four contestants, and the winner covered a mile in a disappointing time of 5:11.54 By late summer, the once-proud movement showed few signs of life. It was still deeply mired in patent warfare, although Witty and Smith had finally ceased their legal hostilities. No doubt realizing the market was slipping away, they hastily pooled their patents and reduced their demands to a collective \$5 per machine. The bitter velocipede makers, who had banded together to form a trade group, retorted that they recognized only the Hanlon patents.<sup>55</sup> By fall, even die-hard defenders of the velocipede conceded its demise. Competitions had virtually ceased; the rinks had all closed, and makers like Kimball & Larkin, once so keen on the future of the bicycle, quietly abandoned production.

### **Assessing the Movement**

The velocipede movement presents a fundamental riddle: Why was it so popular at the onset, yet surprisingly short-lived? To dismiss it simply as a fleeting nineteenth-century fad doomed to failure is to ignore its true significance. The unprecedented interest generated by the original bicycle proves that it addressed actual needs. For one thing, it represented an appealing new form of recreation and exercise — no trivial proposition in a society with increasing amounts of leisure time at its disposal.

What exactly made the prospect of bicycling so seductive? No doubt it was primarily the practical possibilities of the bicycle:

its promise to deliver greater personal mobility. After all, this was an age that offered few means of individual displacement beyond walking or horseback riding. As early as 1867, the *New York Times* correspondent in Paris articulated the case for adopting the new bicycle as a road vehicle: "Is it not absurd, is it not a disgrace to the inventive age we live in, to see a man obliged to employ, in order to get through the street, a great vehicle, as large almost as a house, with two horses and a man to conduct it?"<sup>56</sup> Echoed the *American Artisan* at the peak of the rage: "There is no doubt that an invention of this kind, which could be propelled on common roads with a moderate expenditure of power, would both deserve and receive an extended and remunerative appreciation from the public.<sup>57</sup>

Why then, if the original bicycle commanded such a strong and well-founded appeal, did Americans give up on it so quickly? The conventional explanation holds that the original design was inherently flawed, and that a truly practical bicycle was beyond the reach of contemporary technology. Indeed, most bicycle histories assert that the two-wheeler had to be reinvented in England a number of years later, in the form of the "high wheeler." Only then, the authors argue, did the bicycle assume a sufficient level of functionality to warrant sustained development.

Yet a closer examination of bicycle development undermines this theory. For one thing, the classic "high wheeler," which dominated international cycling in the late 1870s, was essentially a gradual development of the original Lallement velocipede, rather than a fundamentally new invention. Moreover, reasonably functional road machines were developed in France and England within a mere year or two after the collapse of the American industry.<sup>58</sup>

If the bicycle of 1869 was indeed technologically sustainable, why did it disappear so quickly in the United States? Did American engineers simply fail to adopt key improvements quickly enough to satisfy public expectations? Or were they perhaps too impatient, giving up prematurely? I would argue that the hostile business climate, not the pace of development,



Women performers were especially popular, as manufacturers and rink owners tried to sustain interest in the velocipede through the winter and spring of 1868. Although some exhibits of female velocipeding were well received, others provoked controversy. *Illustration courtesy of the author.* 

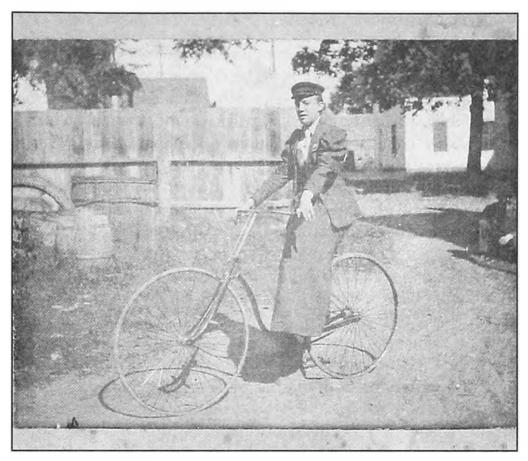
was the main problem. Although the American episode is generally considered infertile, the domestic machine actually made rapid and impressive strides. As early as fall 1868, for example, Thomas R. Pickering introduced a light tubular frame. By March, the "Dexter" bicycle featured a free-wheel mechanism in the front hub, allowing the rider to keep his feet stationery on the pedals. And in April came perhaps the most promising innovation of all: the wire wheel. Introduced by Virgil Price, it greatly reduced the weight of the bicycle while enhancing riding comfort.<sup>59</sup>

Indeed, by the spring of 1869, the best American-made bicycles were logging encouraging results. In late April, the national indoor mile record fell to just over three minutes - less than half of what it had been at the start of the year. Walter Brown, a celebrated oarsman, twice rode an astonishing fifty miles in under five hours at rinks in Boston and New York, and others registered equally impressive feats of endurance.<sup>60</sup> Yet the general public, and even many velocipedists, were virtually oblivious to these promising advances. No doubt the patent turmoil which erupted in February and dragged on interminably discouraged makers from aggressively implementing muchneeded improvements. Consequently, few riders ever saw a bicycle that was in any sense "road-worthy." On the contrary, as the market dwindled, panicky makers rushed to cash in on the remnants of the craze. They flooded the market with cheap, unlicensed bicycles doomed to a short existence and harmful to the velocipede's reputation.

### Conclusion

The warm reception accorded the original bicycle reflected in large part its promise to deliver greater personal mobility. Its surprisingly short life in the United States is, in contrast, more difficult to explain. Most histories blame its premature demise on inherent deficiencies, but we can surmise that the primary obstacles were non-technological in nature.

Velocipede rinks, so germane to the movement, contributed heavily to the public's keen sense of betrayal. They raised



The velocipede craze left a lasting legacy in Portland, as this photo of a later bicycle design suggests. But in immediate terms Lallement's invention was doomed in America by the patent wars of 1868-1869. *Maine Historical Society Photo.* 

unrealistic expectations, yet often featured the cheapest quality machines. At the height of the craze, they extracted a premium from patrons — only to offend their moral sensitivities once the movement faltered. In sum, the rinks epitomized the shortsighted "get rich quick" mentality which permeated and undermined the movement.

But it is perhaps unfair to pin all the blame on these peculiar institutions. After all, they offered the public a unique opportunity to experience a novelty few could have otherwise afforded. And they were also instrumental in generating the extraordinary demand that spurred an army of inventors. That hundreds of

patent applications were filed across the country, some of which recorded vital improvements, suggests that the strong promotional power of the rinks was not altogether misdirected.

Debilitating patent woes were, no doubt, a major factor in the sudden collapse of the industry. In particular, Witty's excessive royalty fees irreparably soured the business climate at a critical juncture. To be sure, he was not the only one who subjected the fledgling industry to unreasonable demands. But he alone controlled the basic bicycle patent, and thus he held the greatest sway.<sup>61</sup> Had Witty been more reasonable at the onset, demanding, say, \$5 a machine (still a sizable sum), no doubt he would have had an easier time asserting his authority. Blatant opportunists like Stephen W. Smith would have found little leverage, while other legitimate claimants would have enjoyed more leeway to charge a fair fee for their own much-needed improvements – without the risk of overtaxing makers.

In effect, Witty poisoned the business climate just when the bicycle desperately needed both material improvement and a reduction in price. Charles Pratt, an early bicycle historian, would later recall how "the trade had no discipline." He summarized the sorry situation as follows: "Carriage makers made the machines, paying royalties when they had to, avoiding them when they could, making the machines as cheap as possible and selling them as dear as possible."<sup>62</sup>

In the ensuing years, the primitive bicycle steadily evolved abroad, gradually assuming the form of the high-wheeler. In 1878, Albert A. Pope of Boston purchased the Lallement Patent with a view to reviving American cycling. He consolidated those patents he deemed relevant, and he vigorously defended them in court. In contrast to Witty, he assessed makers one relatively reasonable lump sum, and liberally reinvesting profits to nurse the young movement.<sup>63</sup> His prudent strategy helped create a prosperous industry.

Had Witty himself exploited the powerful Lallement Patent more judiciously, the original American cycling campaign would surely have survived beyond its inaugural season. Witty's home

state in particular – which registered such a promising start – might well have played a more lasting and significant role in early bicycle development.

#### NOTES

<sup>1</sup>New York Times, January 10, 1869.

<sup>2</sup>*The Velocipede* was published from March 30 to April 1, 1869.

<sup>3</sup>New York Times, August 22, 1867.

'New Haven Daily Palladium, April 5, 1866. See Lallement's own testimony, as given by Charles Pratt in "Pierre Lallement and his Bicycle," Wheelman Magazine, October 1883.

<sup>5</sup>U.S. Patent 59915, granted November 20, 1866; Pratt, "Pierre Lallement and his Bicycle."

<sup>6</sup>The Paris-based *Continental Gazette* reported on June 6, 1868: "The first official velocipede race...took place on Sunday last in the Park of St Cloud." The review *Cosmos* (Paris) reported on September 27, 1868, that nine young men left Rouen on bicycles and arrived in Paris (about seventy-five miles) at 9 PM, taking three hours to rest.

<sup>7</sup>U.S. Patent 79654, granted July 7, 1868; *Boston Daily Advertiser*, August 15, 1869. <sup>8</sup>New York Coach-Maker's Magazine, March 1869.

<sup>9</sup>Salut Public (Lyon), November 18, 1868.

<sup>10</sup>New York Sun, October 17, 1868; Frank Leslie's Journal, November 28, 1868; New York Times November 23, 1868.

<sup>11</sup>New York Times, December 7, 1868; Harper's Weekly, January 9, 1869.

<sup>12</sup>New York Times, January 10, 1869.

<sup>13</sup>Weekly Times (Hartford, CT), January 16, 1869.

<sup>14</sup>New York Sun, January 29, 1869.

<sup>15</sup>Harness and Carriage Journal, December 1868.

<sup>16</sup>Revolution, March 11, 1869.

<sup>17</sup>J T. Goddard, *The Velocipede* (Cambridge: Riverside Press, 1869), p. 85; Pickering & Davis of New York, as illustrated in Goddard, p. 87; *Velocipedist*, March 1869.

<sup>18</sup>National Chronicle, March 20, 1869.

<sup>19</sup>Portland Daily Advertiser, January 26, 1869; Eastern Argus, February 6, 1869; Portland Press, January 26, 1869.

<sup>20</sup>Eastern Argus, January 28, 1869.

<sup>21</sup>Ibid., January 28, February 6, 12, March 11, 1869; Portland Press, February 22, 1869.

<sup>22</sup>Eastern Argus, January 27, 1869.

<sup>23</sup>Ibid., March 2, 1869.

<sup>24</sup>Portland Transcript, February 13, 1869.

<sup>25</sup>Eastern Argus, March 2, 1869. In his 1881 court testimony, Witty gave his age as fifty-three. He was therefore forty in 1868. See *Pope Manufacturing vs McKee & Harrington*, United States Circuit Court, Southern District of New York, in Equity.

<sup>26</sup>American Artisan, September 23, 1868.

<sup>27</sup>Eastern Argus, March 2, 1869.

<sup>28</sup>McKee vs Harrington, United States Circuit Court, Southern District of New York,

in Equity. See Pratt, "Pierre Lallement and his Bicycle"; *New York Evening Mail*, February 13, 1869; *Portland Press*, February 10, 1869.

<sup>29</sup>New York Sun, February 1, 1869.

<sup>30</sup>Eastern Argus, March 2, 1869.

<sup>31</sup>New York Times, February 15, 1869.

<sup>32</sup>Le Courrier des Etas-Unis, February 16, 1869.

<sup>33</sup>Boston Sunday Times, March 7, 1869 (advertisement dated February 28); Eastern Argus, March 11, 1869; New York Sun, February 25, 1869; New York Evening Telegram, March 22, 1869.

<sup>34</sup>The Velocipedist, a monthly, was founded by T. R. Pickering and W. Chester King in New York. It ran from February to April, 1869. See *Maine Farmer*, February 20, 1869; *Boston Sunday Times*, March 7, 1869 (with Kimball & Larkin advertisement dated February 28); *Eastern Argus*, March 2, 1869.

<sup>35</sup>Eastern Argus, March 4, 1869.

<sup>36</sup>Portland Daily Advertiser, March 4, 1869. See New York Sun, March 1, 1869. <sup>37</sup>New York Sun, February 25, 1869.

<sup>38</sup>Ibid., March 1, 10, 1869; *McIntire vs Witty*, U.S. Circuit Court, Southern District of New York, in Equity. Case filed April 9, 1869.

<sup>39</sup>U.S. Reissued Letters Patent No. 3,319, granted March 2, 1869. This was based on U.S. Patent 36,161 describing a "cantering propeller," granted August 12, 1862, to Phillip W. MacKenzie. See also *New York Sun*, April 5, 1869; *New York Coach-Maker's Magazine*, June 1869.

<sup>40</sup>New York Sun, March 10, 1869; Harness and Carriage Journal, April 1869; Smith vs Witty, U.S. Circuit Court, Southern District of New York, in Equity. The case was initiated April 5, 1869. See Smith vs Pickering & Davis, Southern District of New York, in Equity.

<sup>41</sup>San Francisco Evening Bulletin, April 23, 1869.

<sup>42</sup>New York Evening Telegram, May 26, 1869.

<sup>43</sup>American Artisan, May 5, 1869.

<sup>44</sup>Ibid.

<sup>45</sup>Boston Daily Advertiser, May 1, 1869; Portland Daily Advertiser, March 20, 1869.

<sup>46</sup>New York Times, April 25, 1869.

<sup>47</sup>Portland Press, April 5, 1869. <sup>48</sup>New York Times, April 11, 1869.

<sup>49</sup>New York Sun, April 14, 1869.

<sup>50</sup>Ibid., May 17, 1869.

<sup>51</sup>Portland Press, February 24, 1869.

<sup>52</sup>Ibid., March 9, 1869.

<sup>53</sup>On March 24, the *Portland Press* gleefully announced that the city had banned velocipedes from sidewalks.

<sup>54</sup>Bangor Whig and Courrier, July 7, 1869.

<sup>55</sup>New York Coach-Maker's Magazine, July 1869.

<sup>56</sup>New York Times, August 22, 1867.

<sup>57</sup>American Artisan, March 10, 1869.

<sup>38</sup>The Lallement Patent was enforced in the U.S. until its expiration in 1883, precisely because it covered the principle of the high wheeler. On the second point, on

September 10, 1870 Land and Water (London) reported that two cyclists covered 600 miles in ten consecutive days without excessive effort or fatigue.

<sup>59</sup>American Artisan, October 21, 1868, March 10, 1869; Scientific American, April 17, 1869.

<sup>50</sup>Eastern Argus, April 29, 1869. The first recorded indoor mile times in the U.S. exceeded six minutes. In early March, George Hudium rode a mile in 3:06 at a rink in Indianapolis, setting a new record. See American Artisan, March 10, 1869; Portland Daily Advertiser, April 29, 1869. Walter Brown, the champion U.S. Oarsman in 1867, was from Portland, Maine, according the National Police Gazette, September 14, 1867.

<sup>61</sup>The National Chronicle noted on March 6, 1869: "The Lallement Patent is the only Patent in existence controlling the manufacture of velocipedes in the United States."

<sup>62</sup>"A Sketch of American Bicycling and its Founder," *Bicycling World*, 1891, pp. 342-347.

<sup>63</sup>Ibid.