

GAS STATIONS IN THE SKY

BLOOD ON DEMAND

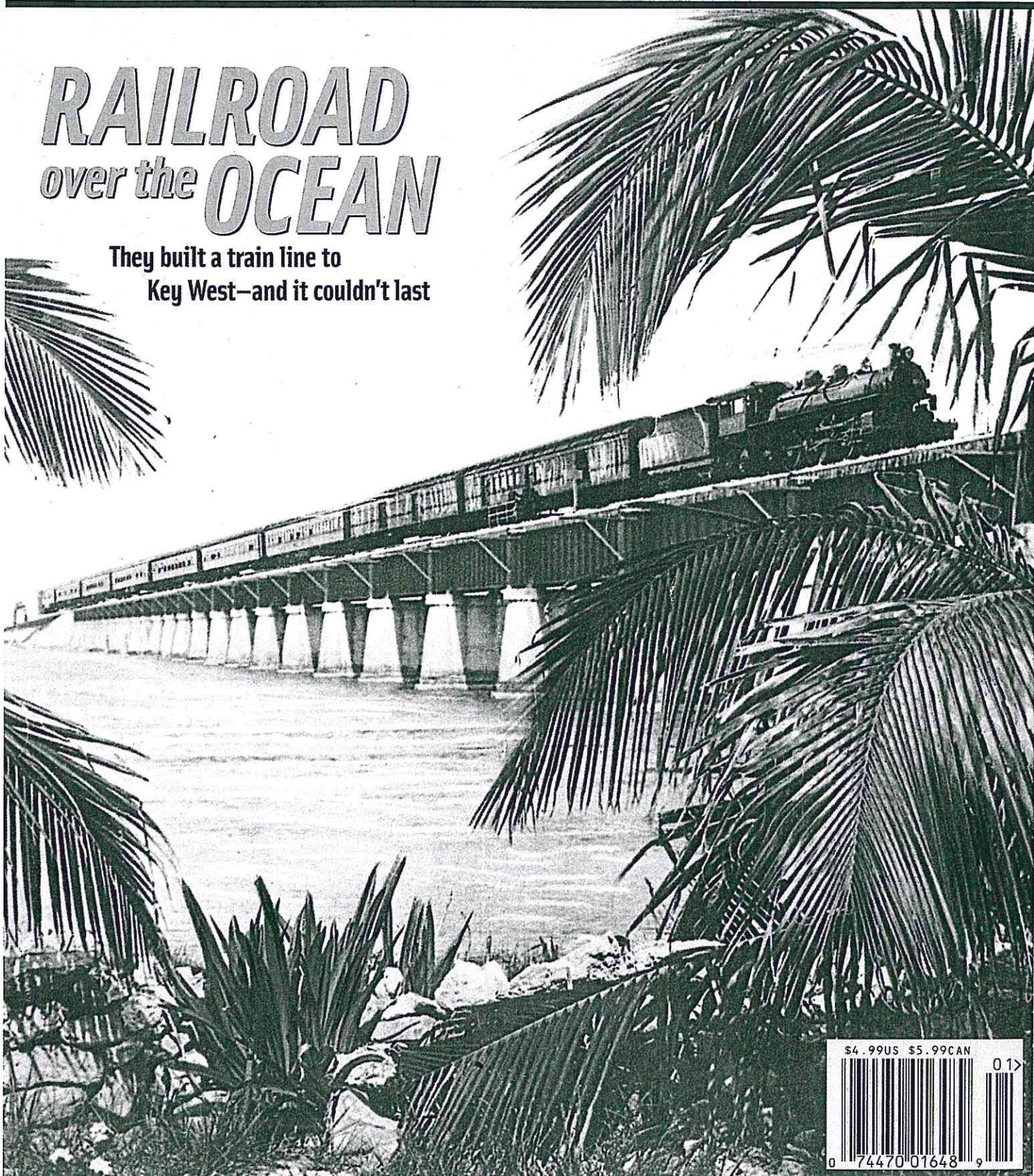
PINBALL'S MANY FATHERS

American Heritage of  
**Invention & Technology**

IN ASSOCIATION WITH THE NATIONAL INVENTORS HALL OF FAME | SPRING 2004 | VOLUME 19 | NUMBER 4

**RAILROAD**  
*over the* **OCEAN**

They built a train line to  
Key West—and it couldn't last



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# *The Railroad That Went to Sea*

**HENRY FLAGLER DEFIED  
THE ELEMENTS TO  
LAY TRACKS ACROSS  
THE OCEAN TO KEY WEST—  
BUT ULTIMATELY THE  
ELEMENTS WON**

BY T. A. HEPPENHEIMER

Children wave at a  
train at one end of  
Seven Mile Bridge  
around 1926.



**D**RIVE THE MAIN ROAD THROUGH THE FLORIDA KEYS, AND you will come to a stretch where you are out of sight of land. You can see nothing but water, sky, the highway you're on—and, alongside, the Seven Mile Bridge, formed from hundreds of sections of railroad viaduct set atop concrete supports that rise directly from the ocean. Constructed nearly a century ago, the bridge continues to stand as a memorial to the even vaster work of which it was a part: the Key West Extension of the Florida East Coast Railway.

In an era of heroic engineering feats, only the Panama Canal was more ambitious. Constructing the Extension, linking islands in the ocean, called for moving nearly 18 million cubic yards of rock and rubble, four times the volume of the later Hoover Dam, or enough to make a cube 785 feet tall, which would bury the Washington Monument to a depth of more than 200 feet. The Extension itself, 128 miles long, could have been laid down in months on the flat, hard ground of the Midwest, but in the Keys it took seven years, as workers struggled against mosquitoes, torrential rains, and hurricanes. Nor has anything similar been built since. The longest railroad bridges of later decades have had lengths of less than five miles.

The Key West Extension took shape as the idea of the tycoon Henry Morrison Flagler, who made his fortune as a partner of John D. Rockefeller. The two men started their careers near Cleveland, prior to the Civil War, when both worked as grain merchants. After the war, Rockefeller moved into oil refining. Flagler joined Rockefeller's firm in 1867, and the two men became close friends. Perhaps Flagler's most astute business move was to negotiate rebates from railroads, thereby assuring the low transport costs that were a key to success. In 1870 Rockefeller founded Standard Oil. Asked later if this had been his idea, he responded, "No, sir, I wish I'd had the brains to think of it. It was Henry M. Flagler."

Flagler first saw Florida during the winter of 1878–79. His wife had come down with tuberculosis; doctors prescribed a warm climate, and he responded by taking her to Jacksonville. She died in 1881, but he remarried two years later, and he and his new bride returned to that city in 1883–84 for their honeymoon. After sailing down the St. Johns River, they visited the town of St. Augustine. Just then the North was in the grip of a severe cold wave, and the Flaglers were greatly pleased to see

waving palm trees and blossoming orange groves. He knew that a good hotel could attract wealthy people from New York who could travel during the winter, and he proceeded to build St. Augustine's Ponce de Leon, designed by Carrère & Hastings, who later designed the New York Public Library.

It was an immediate hit with the Gilded Age leisure class. Press reports called it better than Chicago's Palmer House and San Francisco's Palace. Flagler responded by building a second, similarly lavish hotel nearby, the Alcazar, and he announced that Florida would now be his permanent wintertime home. Asked why a Rockefeller partner would plunge into the hotel business, he answered, "For the last 14 or 15 years I have devoted my time exclusively to business, and now I am pleasing myself."

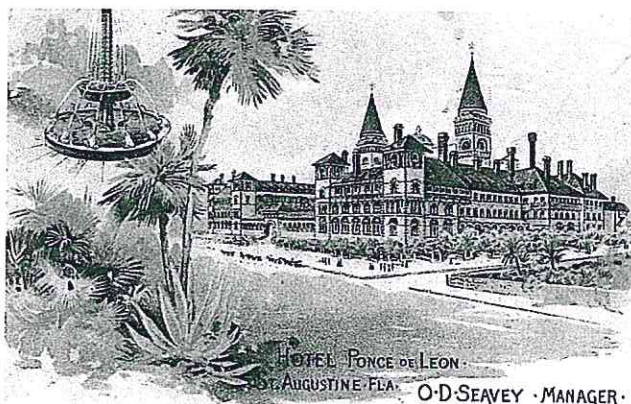
He was well aware that his clientele would be arriving in private railroad cars, and he needed tracks to match. Only narrow-gauge lines ran between Jacksonville and St. Augustine, so he purchased the right of way in order to upgrade it. He wanted to cross the St. Johns River. It was 90 feet deep, deeper than anything rails had ever bridged, but he told his engineers to do it, and they did.

Now Flagler was a railroad builder. The whole of Florida lay open to him, for the state was thinly settled; its 1880 population was barely a quarter of a million. South of Lake Okeechobee the land was mostly swamp. Key West, the state's largest city, had only 10,000 people in 1880. Settlers were kept away by mosquitoes, which

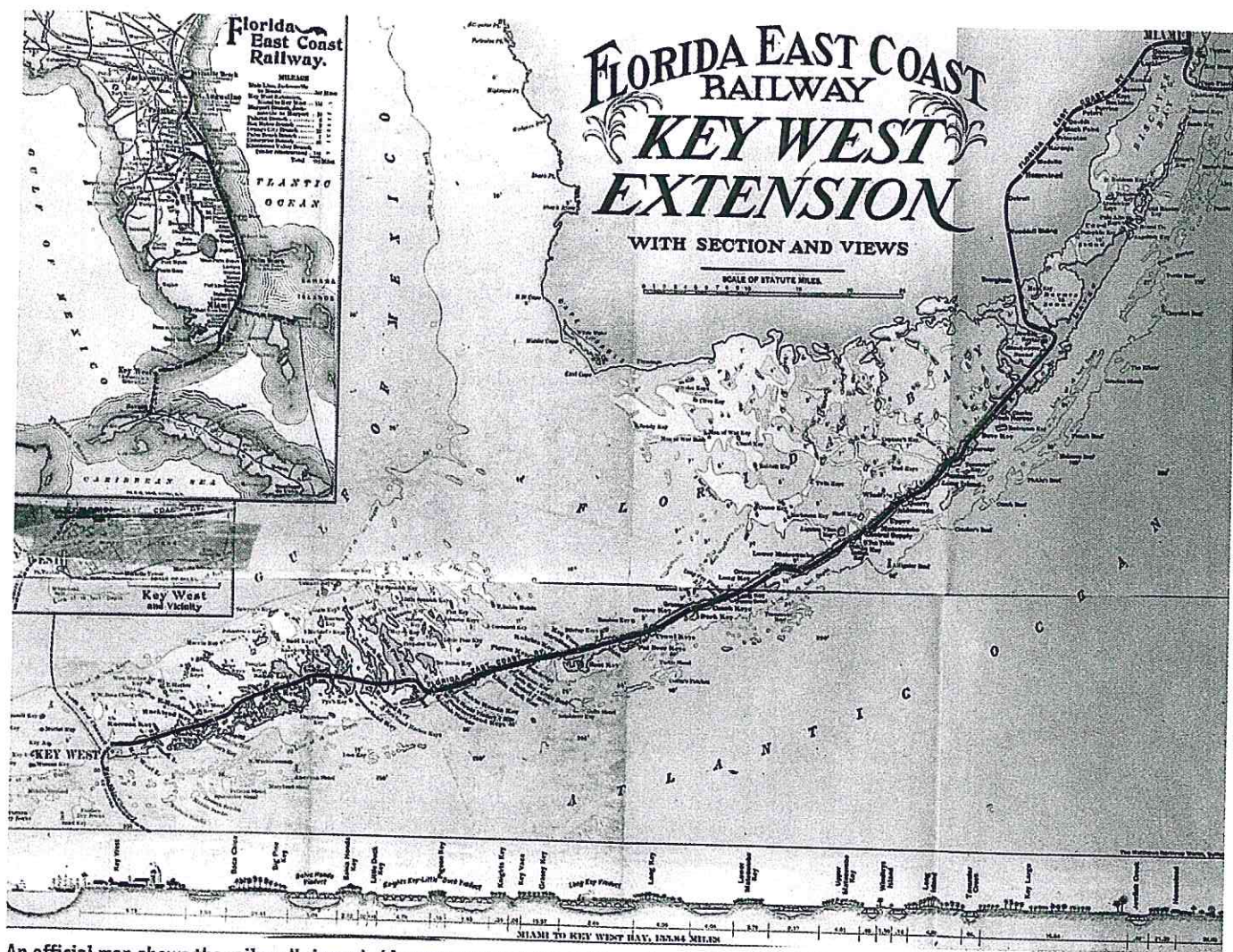
bred readily in pools of standing water that formed amid the frequent rainstorms. But the winter months were relatively dry, and the mosquitoes might be kept at bay then.

Flagler extended his line to Ormond Beach, renovated an existing hotel, and made it so attractive that Rockefeller himself decided to build his winter home across the street. Flagler then pushed south to Daytona Beach, which had some of the finest beaches in the nation. The Florida legislature came on board, granting him 8,000 acres of land for every mile of track that he laid. He now had a gusher to rival Rockefeller's. He went on to acquire more than two million acres of Florida land for almost nothing.

Still, he knew that a railroad needed more than tracks; it needed places to go. He found his next one in 1892, when he visited the seaside village of Palm Beach. It had fewer than a dozen houses, but geography enhanced its charm, for a long,



The hotel with which Henry Flagler began his Florida second career.



An official map shows the railroad's improbable route over swamp, coral, and open water—128 miles in all from Homestead to Key West.

narrow channel separated it from the mainland and could serve as a moat. He declared, "I have found a veritable paradise." He built a hotel there, the Royal Poinciana, which he described as the largest in the world. It had 540 rooms and charged up to a hundred dollars a night for a suite, in an era when many workers raised families on three dollars a day or less. Still, the hotel wasn't big enough for the demand, so he built another one, Palm Beach Inn, renamed the Breakers in 1901.

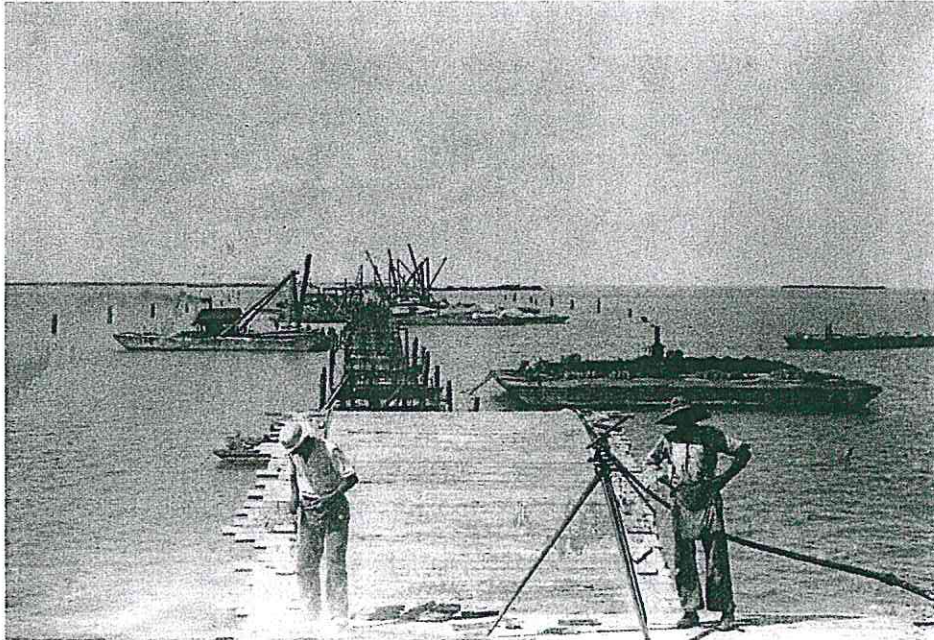
Miami might have been an obvious prospect for his next destination, but it didn't exist yet. There was only a settlement called Fort Dallas, with fewer than 500 people. It had little to attract Flagler, but he took a fresh look at the town in the winter of 1894–95, when a severe freeze wiped out crops and citrus groves as far south as Palm Beach. Learning that Fort Dallas had been spared, he decided to build yet another hotel, the Royal Palm. It opened in 1896. His rails reached the area that same year, and local leaders responded in July by incorporating the town as a city. Its council wanted to name it Flagler, but he declined the honor, suggesting instead that it be named for the nearby Miami River.

By then he was running out of mainland. Even so, another destination beckoned: Key West, at the time the largest and

most prosperous city in Florida. It had flourished earlier in the century largely because it was surrounded by reefs. Ships often ran aground there; salvagers, looking to the sea from wooden watchtowers, shouted, "Wreck ashore!" and proceeded to rescue passengers and secure the cargoes. Under maritime law, much of what they could grab was theirs to keep or sell. By century's end Key West was also a major center for both cigarmaking and sponge fishing. The town was a seaport too, with a naval base and a steamship line that provided service to New York and Galveston.

Flagler was 66 years old in 1896. He had already won striking success in two careers, and for a time he was ready to rest. But events of the next few years drew his gaze anew to Key West. The town was a port of embarkation for trade with Cuba, and that trade was likely to increase sharply after America took control of the island in 1898 following the Spanish-American War. Then in 1903 the federal government committed itself to building the Panama Canal. Many of its ships would head for the United States, and Key West was 250 miles closer to Panama than Tampa, its nearest rival.

To reach Key West, Flagler would have to build across the Keys. This string of sometimes widely separated islands was



At left, workers look over completed spandrel walls on the Long Key Viaduct, October 1907. Above, laborers' tents and cabins on Windley Key, 1906.

sparsely populated, so he would have to bring in a work force from elsewhere. Still, he had done this when building the extension to Miami, leasing convicts as laborers for \$2.50 per month. There was no fresh water in the Keys; the local people stored rainwater in cisterns, and Flagler's larger water supply would have to come in by boat. However, he had dealt with the logistics of heavy construction in his early work. He had built his Royal Poinciana in Palm Beach while his railroad tracks still lay well to the north and had ferried in his building materials using cargo ships and riverboats.

The Keys would soon be described as "worthless, chaotic fragments of coral reef, limestone, and mangrove swamps . . . the sweepings and debris which the Creator hurled out to sea after he had finished shaping Florida." Good surveys were essential as part of the preliminary effort, and Flagler entrusted them to his engineers. In January 1905 he decided he was ready to proceed. He met with his general manager, Joseph Parrott, and had a terse, much-reported exchange.

FLAGLER: Joe, are you sure this railroad can be built?

PARROTT: Yes, I am.

FLAGLER: Very well, then. Go to Key West.

Flagler's rails already extended beyond Miami to Homestead, narrowing the distance to Key West to 128 miles. Some 50 of these miles crossed open water, and the project came to be called "the railroad that goes to sea." One early plan envisioned using dredges to scoop and shovel material to fill the inter-island gaps. This would have turned the Keys into a continuous peninsula, a long and narrow rampart. Government

scientists objected, noting that it would disrupt the natural tidal flow between waters to the north and south of the Keys. Flagler then modified his plan to include viaducts supported by concrete arches, as well as 6 miles of deep-water bridge spans, with the rest of the route still being a peninsula. Then, with construction under way, additional lengths of the proposed railway were built as bridges instead, because of technical issues.

He needed plenty of unskilled labor, for which the going rate was a dollar a day. He tried to attract good men by offering \$1.25, which was soon raised to \$1.50, but many of his initial recruits proved to be New York derelicts, who rode his rails only part way and then deserted. He turned to hiring black men, whom he later described as being "of a much better grade" and "far superior to the whites." He also brought in workers from Cuba and the Cayman Islands. Sponge divers, often of Greek descent, did much of the underwater work.

IN REMOTE AREAS THE MEN LIVED IN TENTS, COOKING their food outdoors. Wherever possible, though, they stayed aboard large double-deck houseboats known as "quarter boats," with windows screened against mosquitoes and flies. A typical workday ran to 10 hours, with a 1-hour break for lunch. Foremen were fired if they treated men brutally, and in the words of a Chicago reporter, the camps were "clean, food good, pure ice and water supplied to each camp, no liquor sold in or near." That last fact brought complaints, as did the absence of female companionship. But Sundays were free, and a man could find both those pleasures in Miami.

Flagler's plans called for building a major supply base halfway along the Keys at what became the town of Marathon,

## *After a deadly 1906 storm, Meredith declared, "No man has any business connected with this work who can't stand grief."*

on Key Vaca, and having work go forward in several locations at once. An early focus of effort lay in the swamps on the mainland south of Homestead, where track laid conventionally would have sunk into the mire. It was necessary to build raised embankments to support the track. Yet conventional motor-driven equipment was useless within the marshland, and so were mule-driven carts.

Flagler responded by building shallow-bottom barges, each carrying a steam shovel. To clear the right of way, workers slashed through a covering of mangrove and brush using axes and machetes. Then the barges advanced on each side of the planned roadbed, scooping up muck and piling it between them, where it could be graded and made ready to support the track. The dredged excavations swiftly filled with muddy water, forming channels along which the barges could continue to advance.

A visiting newspaperman described the mosquitoes as "almost unbearable, and the problem is to persuade laborers not to run away." He tried to protect himself at night by sleeping under blankets but found that the mosquitoes "attacked from below and bit through the canvas cot." Men wore coats, gloves, and long-sleeve shirts while swinging 20-pound sledges and manhandling wheelbarrows in the sopping heat of the Florida summer. Still, the measures worked. Flagler provided medical care for his workers, and they managed to remain free of malaria and yellow fever.

Within months, work was under way on Key Largo, the largest of the Upper Keys. Flagler now operated a formidable fleet of equipment that included a dozen dredges, 10 power shovels, 10 concrete mixers, and 11 pile drivers. He soon had additional need for them, for as an advance party hacked its way through Largo's thick mangroves, the men found a lake a mile across that didn't appear on maps and couldn't be bypassed. This raised the question of what other surprises lay undiscovered, but for now the problem was to cross this obstacle.

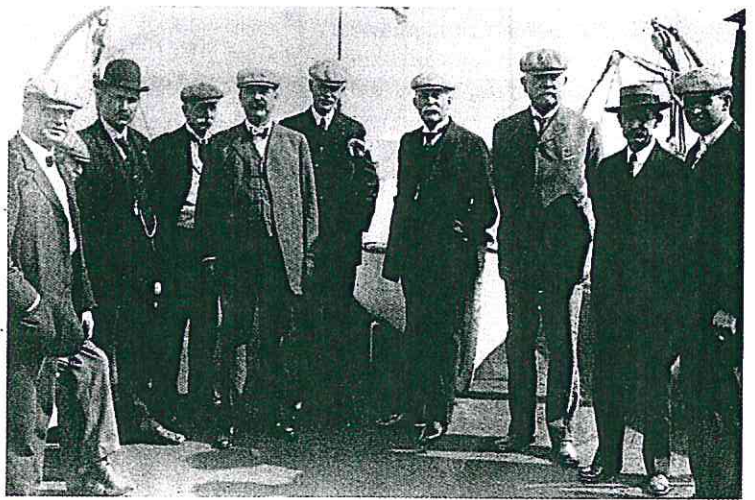
The lake was shallow. Conventional practice called for laying a foundation by using pile drivers to set heavy logs into the lake bottom, but the bottom was covered by a deep layer of unstable peat. Joseph Meredith, the project engineer, solved the problem by dredging marl, a hard clay, from the nearby sea bottom and dumping it into the lake. This created an embankment sturdy enough for the heaviest locomotive.

The unexpected activity delayed the overall schedule, and Flagler was in a hurry. From the outset he had arranged for some phases of the effort to go forward around the clock and had provided generators and electric lights. Now, midway through 1906, Parrott and Meredith decided to have their men work through the hurricane season, which lasts for much of the summer and fall. If a hurricane blew in, it would strike workers who were spread across much of the Keys, on islands only a few feet above sea level.

In mid-October a hurricane hit Havana and veered northward into the Keys. A quarter boat broke loose from its moorings; powerful winds pushed it into the open sea. As it broke up, some men, resigning themselves to what seemed to be inevitable death, broke into first-aid kits and drank down lethal doses of opiates. Many caught hold of floating debris, and over 70 were rescued. But more than 100 men died in the storm. Most of them had been on that houseboat.

The hurricane ended the use of the quarter boats. Thereafter workers were housed on land. Meredith surveyed the damage and urged stoicism, saying, "No man has any business connected with this work who can't stand grief." Flagler remained in St. Augustine and sent a message: "Go ahead." Much track had been washed out in the storm and had to be rebuilt. Still, the effort went forward, with the focus of attention now on the Long Key Viaduct, halfway down the Keys. This was Flagler's first large railroad bridge, spanning more than two miles of open water.

He had told a financier that the construction of his Extension would be "perfectly simple. All you have to do is to build one concrete arch, and then another, and pretty soon you will

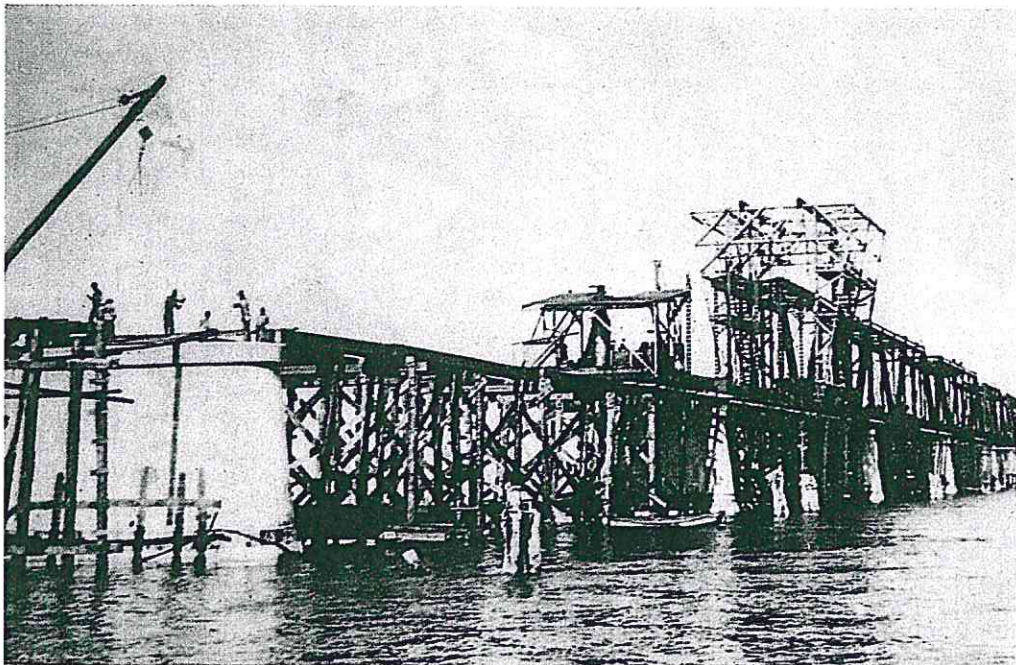


The railroad's builders gather on opening day, 1912. Henry Flagler is fourth from the right; Joseph Parrott, his general manager, stands at the far left.

find yourself in Key West." The Long Key Viaduct was planned as a succession of such concrete arches, and while the work certainly was far from simple, it did follow standard practice.

The bedrock was hard coral and lay beneath sand and sediment that were easy to remove. Once the sediment was cleared, surveyors, working from platforms in the water, directed the activity of pile drivers on barges, which drilled holes into the coral. The piles themselves, pounded into the holes, were of wood tipped with steel and anchored the construction to the sea floor.

Next came the cofferdams, large wooden boxes with open tops, formed from prefabricated panels and set in place to sur-



A section of the Bahia Honda Bridge, over the railroad's deepest water, under construction in 1909.

round each group of 21 to 28 protruding piles. Their bottoms were also open and rested on the seabed. Workers poured a thick layer of hydraulic concrete, which hardens underwater, into the bottom of each box. This formed a watertight seal as well as a foundation. The box was then pumped dry to create a work area. A second set of wooden forms was lowered into the box and assembled, and steel reinforcing rods were placed within. The forms could then be filled with more concrete to produce a strong upright support for the arches. After the concrete hardened, both the forms and the panels of the cofferdam could be removed for reuse. Additional panels, assembled in the open air atop the uprights, were filled with concrete to shape the arch spans themselves, which carried the track.

The final viaduct contained 215 such arches. They took skill and experience to build. Tests showed that American grades of cement were inadequate for use in seawater, so Flagler and Meredith imported a superior type from Germany. Currents sometimes shifted the pile-driving barges out of position. Sometimes a pile driver struck a pocket of loose sand and had to move a few feet, in hope of greater solidity. With the piles in place, a foundation couldn't be laid merely by dumping wet concrete into a water-filled cofferdam, for the water would have diluted it into uselessness. A specialized tool was necessary, a funnel from which concrete flowed into a wide hose and was deposited directly on the sea floor. The steel reinforcing bars in the uprights kept the concrete from flowing smoothly into all areas of a wooden form, and when engineers made the

the trains and carry passengers on to Key West or Havana.

Between Knights Key and Little Duck Key lay the route's longest stretch of open water. It became the location of the Seven Mile Bridge. During construction it was regarded as an assemblage of four component bridges. The westernmost section, near Little Duck Key, was similar to the Long Key Viaduct, with 210 concrete arches, each 35 feet long. East of that, in deeper water, was a 2.6-mile bridge made of steel deck plates resting on huge concrete piers. This section was interrupted in the middle with a swing bridge that could pivot to allow boats to pass. Next came a trestle that curved over minuscule Pigeon Key, built in the same manner but with much smaller piers and plates. Connecting Pigeon Key and Knights Key was another two-mile stretch of monumental piers supporting big steel plates.

EVERY BRIDGE AND VIADUCT HAD TO STAND HIGH ENOUGH above the ocean to keep the track from being inundated by the tallest foreseeable storm waves. Concrete arches served in the shallower areas, such as near Long Key, but much of the Seven Mile Bridge lay in deeper water. There the engineers turned to conventional steel-deck construction, supporting 80-foot-long sections of deck on concrete piers. Farther down the line, at Bahia Honda, where the water was deeper still, the crews put up particularly tall piers in the channel and spanned them with trusses built of riveted steel girders.

As construction proceeded, the hurricanes recurred. Now, though, the builders were ready. In the words of one manager,

concrete wetter so that it would flow better, much of it leaked out. The first concrete castings had voids that had to be patched by masons, but as managers experimented with various mixtures and pouring techniques, they learned to make good concrete and to pour it reliably.

The final viaduct, completed early in 1908, looked like a Roman aqueduct built in the middle of the ocean. Flagler was delighted, and he commissioned artists and photographers to capture views of a passenger train steaming across. Those trains rolled off onto 16 miles of track that already had been laid beyond the viaduct's western abutment, so the end of the line now lay only about 50 miles from Key West. Flagler built another hotel, on Long Key, and began offering through-service by rail from New York to nearby Knights Key. A dredged channel enabled steamships to meet



## ***Flagler turned 82 in 1912. Three weeks later he rode the first train to Key West. "Now I can die happy," he said. "My dream is fulfilled."***

"We have found it more economical to sink our floating equipment in the most protected waters and raise it and repair it when the storm has passed." His chance to do this came in October 1909, when a hurricane struck that had considerably more power than the one three years before.

Fourteen men died, but 3,000 others rode out the storm in shelters near Marathon. The bridges and other construction came through in good shape. Still, more than 40 miles of roadbed and track had washed away. Flagler by now had enough dredges and shovels to reshape the Keys to his liking, and he decided that the problem lay in storm-driven waves. His embankments had blocked many of the channels through which such waves had flowed, leaving them no recourse but to wash high up onto the islands. He responded by changing the overall plan to increase the length of open water from the initial 6 miles to 18. He restored passenger service to Knights Key and advised his associates, "My recommendation is to hoist high Key West's flag, keep it waving, and let it bear the inscription 'Nil Desperandum.'" The town remained the destination.

A year later another powerful hurricane blew in. Many such storms come and go within hours, but this one stayed for more than a day and had far more time to do damage. Only one man died, but the waves dislodged one of the main support piers at the Bahia Honda Bridge. This had been a particularly sound piece of construction, and the damage raised thoughts of a bridge failing and a train plunging into the ocean. Engineers mounted wind gauges at the approaches to every bridge; if a gale topped 50 miles an hour, an electrical connection would turn a signal light red to warn locomotive crews not to proceed.

Flagler reached the age of 82 in January 1912. As early as 1905 he had vowed to "ride his own iron" to Key West, and he did it three weeks after that birthday. He boarded his private railroad car at West Palm Beach, spent the night in Miami, and continued south the following day, with more than half the people in Key West turning out to cheer him. A military band played amid morning sunshine as the train approached. Flagler's eyesight was failing; when a chorus of a thousand children sang patriotic songs, he turned to his old companion Parrott and said, "I can hear the children, but I cannot see them." Yet he still was strong enough to give a short speech of his own. Then

he placed a hand on Parrott's shoulder and whispered, "Now I can die happy. My dream is fulfilled."

His dream had come true at a price. Perhaps 200 men had died during the construction, most of them in connection with hurricanes, but at least 21 from accidents with dynamite, which maimed an additional dozen. The cost in money had come to \$27,280,000, or about \$200,000 per mile.

Key West in 1912 was still a working town and not the tourist destination of later years. Passengers rode the trains onto a long wharf, walked a few yards, and then stepped directly onto the gangplank of a ship headed for Havana. That city was the true destination, and Flagler, who lived into

1913, went out of his way to make his rail accommodations as appealing as his hotels. In the words of a Havana newspaper, "This train carried the latest design all-steel Pullman drawing room and Standard sleeping cars. . . . There is no change of cars between Key West and the Pennsylvania Station in the very heart of New York City."

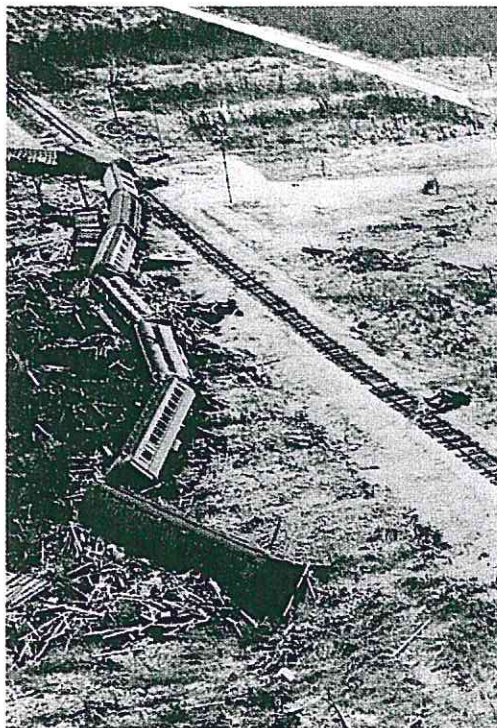
The railroad itself nevertheless remained a work in progress, at least for several years. More than half the total movement of earth and rock took place after Flagler's visit, for heavy equipment could now come in by rail rather than by barge. Much of this work replaced the initial roadbed with a raised one that could better resist storms. Many bridges were also replaced, with permanent structures of concrete and steel supplanting wooden trestles that had useful lives of only a few years.

The trains rolled on through the next decades, though Key West never became a major port. Its island was

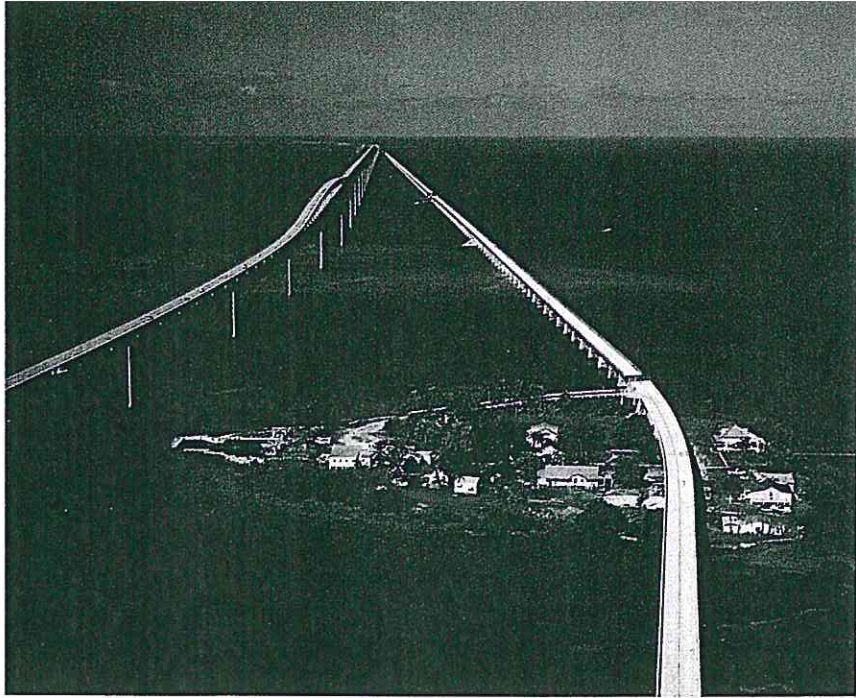
simply too small, and it needed extensive wharves and warehouses that never were constructed. Still, its tourist trade expanded during Prohibition, which was openly flouted in Key West and of course didn't apply at all in Havana.

The Depression and the repeal of Prohibition cut deeply into passenger traffic. Moreover, it became possible to reach Key West by automobile. The initial route, in 1928, included 40 miles of travel by ferry. Five years later the Florida legislature instituted a plan to eliminate the ferries by building a continuous roadway. Such a highway would threaten the very reason for the existence of Flagler's railroad.

The railway had been built amid hurricanes, and in a hurricane it died. In September 1935 a force of several hundred men



Haycraft's relief train, tossed from the tracks, 1935.



The new Seven Mile Bridge passes by Pigeon Key. The original span is on the right.

was working on the highway near Islamorada, 70 miles from Miami, when Labor Day brought hurricane warnings in Key West. An official in Islamorada phoned his boss in Jacksonville and urged him to arrange for a special train to evacuate the workers. A locomotive engineer named J. J. Haycraft was told to report for duty in Miami, where a train was ready, its oil-fired locomotive able to get up steam somewhat faster than a coal-burning one.

Haycraft set off late in the afternoon, proceeding slowly amid the violence of the intensifying storm and stopping at Windley Key to pick up an initial group of refugees. When he started up again there, his train lurched and jerked to a halt. A heavy steel cable from a trackside crane had snagged the locomotive. It took more than an hour to cut it away.

Islamorada was less than 20 miles farther on, but the rails lay only seven feet above normal sea level, and waves were already sweeping over the track. Night had fallen, with sudden bursts of lightning streaking the sky. As Haycraft approached his destination, he saw people huddled in the lee of a cluster of buildings. The storm had knocked out the electricity, and he feared that those structures might collapse, showering everyone with debris, so he continued past the depot for several hundred yards, to the widest part of the island. Amid torrential rain that blew horizontally, people made their way toward the train and began climbing aboard.

**S**UDDENLY HAYCRAFT'S FIREMAN GRABBED HIS SHOULDER and shouted in fright. Seawater, piling up in front of the hurricane's fiercest winds, was rising to a height of 17 feet, to inundate the island. Haycraft reached for his throttle—and again felt his train shudder to a stop. The storm surge had thrown a boxcar from the tracks, automatically locking the air brakes. As the water rose, it flowed into the locomotive's firebox. Now there was no way to raise steam; the engine was dead. It was heavy enough to remain upright, but the storm left the cars lying in a great arc alongside the track.

This was one of the worst hurricanes on record. Its gusts may have approached 200 miles per hour, a wind speed usu-

ally associated with tornadoes. Lesser hurricanes blow palm trees nearly parallel to the ground and send their fronds streaming; this one snapped their trunks as they stood rooted in the ground. Nearly 300 of the Islamorada workers died, many by drowning, others by being impaled by flying boards. The death toll included a similar number of local residents. Ernest Hemingway, who had rushed up from Key West with a rescue party, recognized two of them as "very nice girls who ran a sandwich place and filling-station three miles from the ferry."

Despite its power, the storm did not destroy the railroad. It did not even do major damage. Flagler's bridges and viaducts all came through in good condition, and while more than 40 miles of the right of way were washed out, the rails and embankments were left in shape to be repaired. Temporary track, laid to Islamorada, even allowed Haycraft's locomotive to be recovered.

But while this great hurricane did not destroy the railway, it did kill it. Financial difficulties had already driven the company into bankruptcy, and its receiver had no wish to throw good money after bad. Company officials petitioned in federal court for authority to abandon the line, and they won the court's assent. They then sold the existing bridges and right of way for a net of \$640,000, the amount left after legal fees and costs of sale. The state's highway planners now found themselves in possession of a superb set of railroad viaducts and causeways that proved readily adaptable for use by motor vehicles. The resulting highway provided a direct route to Key West. It opened in 1938 and remains in service to this day, with all Flagler's bridges replaced with new construction by 1983.

What, finally, did Flagler accomplish? His Florida East Coast Railway, his main line on the mainland, did for Florida what the great transcontinental railroads did for the West. Like those roads, it spurred growth by bringing in settlers and transporting their agricultural products to urban markets. By contrast, the Key West Extension had little impact even on Key West. Elsewhere, many towns grew and prospered because they lay on railroad lines, but the Key West passengers merely passed through while traveling to and from Cuba.

The road's construction had introduced new methods for crossing swampland and for building railroad bridges of unusual length, but these achievements had little influence. Few marshlands called for railroad service; few long causeways in subsequent decades were built to resemble Roman aqueducts. Even so, there was a grandeur to Flagler's accomplishment. He showed what a single extraordinary man could accomplish—if only he had enough money and will. ★

T. A. HEPPENHEIMER wrote "How America Chose Not to Beat Sputnik Into Space" in the Winter 2004 issue.