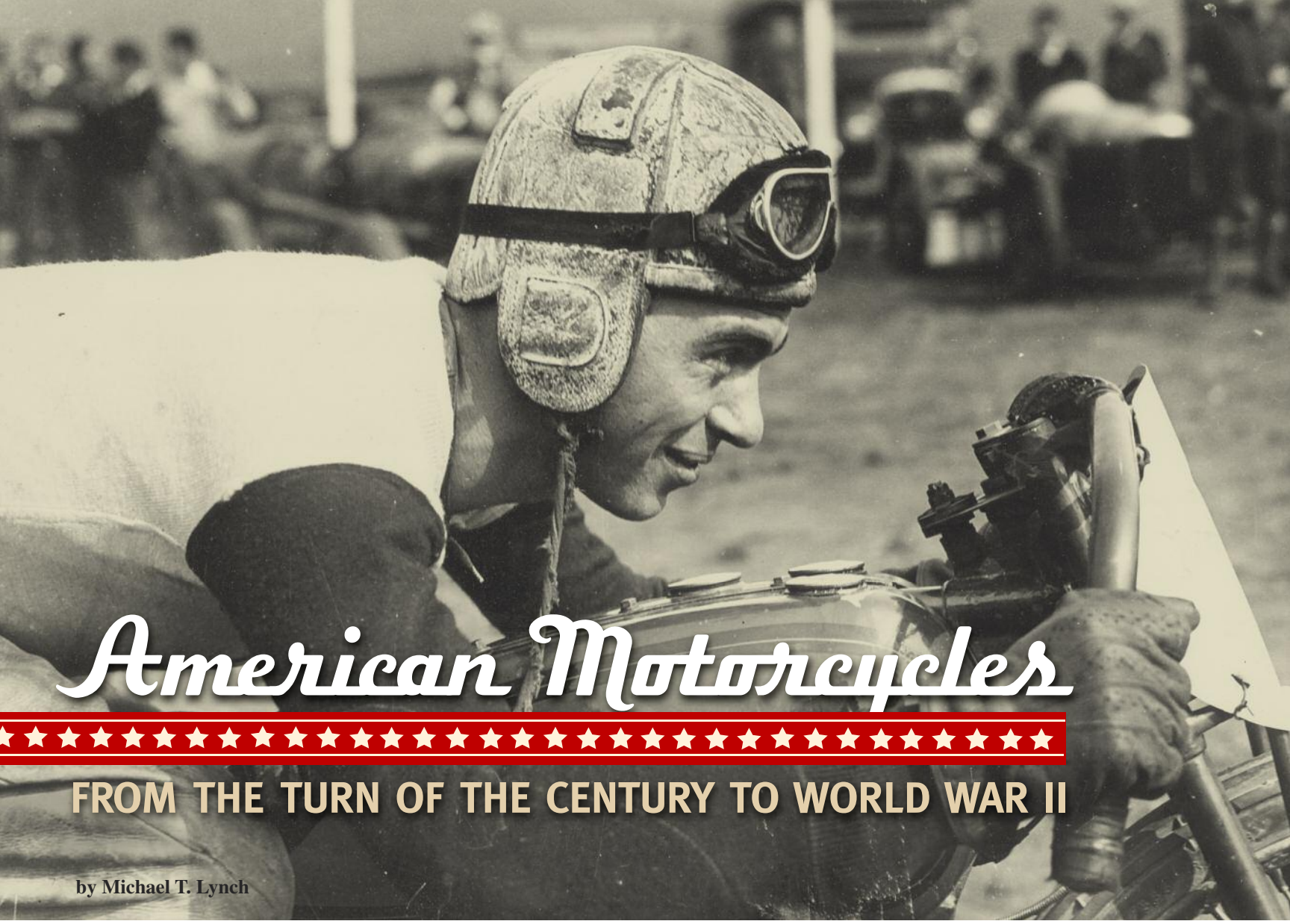


American Motorcycles

FROM THE TURN OF THE CENTURY TO WORLD WAR II

by Michael T. Lynch

In the 1890s, motorcycles in America were a curiosity, sometimes seen at the circus or the county fair. Speed contests were organized on both coasts immediately after the turn of the 20th century and commercialization of the two-wheelers soon followed. In 1901, bicycle racer George Hendee and engineer Oscar Hedstrom started the Hendee Manufacturing Company in Springfield, Massachusetts, and created the Indian motorcycle. Two years later, William S. Harley and Arthur Davidson, operating out of a ten-by-fifteen-foot wooden shed in Milwaukee, Wisconsin, began Harley-Davidson. These two nameplates would form the nucleus of the American motorcycle industry for the next half century.

From their beginnings, American motorcycles were among the world's finest. In the first years of the 20th century, America, France and Germany were the innovators, with the British playing catch up due to restrictive local laws regarding motorized vehicles and a ban on racing on public roads. As with automobiles in this period, new marques were born seemingly every month. Besides Harley and Indian, examples of pre–World War I American motorcycles on the show field today include Excelsior, Flying Merkle, Henderson, Iver Johnson, Pierce (from the makers of the Pierce-Arrow car), Reading Standard, Sears, Thor and Yale.

Above: The legendary Joe "Smokin' Joe" Petrali was one of the finest board track racers of his generation, winning the National Board Track Championship in 1925. He set a U.S. land speed record of 136.183 mph at Daytona Beach in 1937, and the record stood for over 11 years.

The industrial era was fascinated by speed. For the urban masses, most of whom hadn't even been on horses, railroads had been the only place where the common person could go faster than he could run. With the advent of bicycles, motorcycles and automobiles, the experience of speed became more widely available—and manufacturers of all kinds used racing to prove the worth of their products.

Some of the earliest motorcycles—those built around the turn of the century—were used as forerunners, breaking the wind and allowing the wildly popular bicycle racers to set new records. Early motorcycle contests took many forms, among them races on dirt oval tracks, timed runs at places like Ormond Beach in Florida, two machine contests on tiny velodromes designed for bicycles, and cross-country record setting. Publicity was high for cross-country rides; in 1914 Erwin "Cannonball" Baker became a household name when he rode an Indian from San Diego to New York in 11 days, 12 hours and 10 minutes, setting a record.

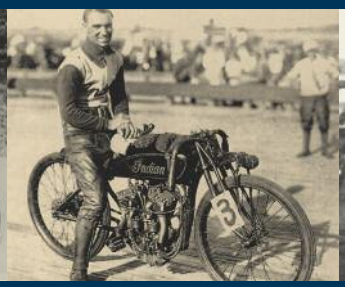
Unlike in Europe, road racing was not prevalent in the United States, where there were few roads outside urban areas where circuits could be established. This was due to the railroads, which lobbied against the expenditure of public funds for roads "to accommodate rich people's playthings."

Nonetheless, early American motorcycles were competitive internationally. An Indian won the world's most famous motorcycle race, the Isle of Man Tourist Trophy in 1911. In fact, the marque swept the first three places—the first time any marque had scored a hat trick there. Indians remained competitive on the island until the mid-1920s.

By 1913, Indian made 32,000 units and was the largest motorcycle manufacturer in the world. That was the firm's apogee although it continued to be a major presence in the market and the original company survived until 1953. After World War I, Harley-Davidson took over as the largest manufacturer until its sales were overtaken by Germany's DKW in 1928.

As international racing became more codified, the maximum displacement of the most prestigious class was limited to 500 cc. This did not suit American motorcycles as they had been developed in response to the straight roads of the continent and the long distances between city centers. This topography led to the creation of large displacement V-twins and even four-cylinder engines to swiftly cover the miles involved. As a result, many American marques didn't have engines that fit European racing formulae, and American racing became a specialized form of its own, running on dirt and board track ovals. These more readily fit the American racing ethos, which was more about business than sport. The ovals had fences and gates so the promoters could more easily control the sales of tickets as well as food and beverage concessions.

The motorcycle board track craze began in 1909. The first of these speedways was designed that year for motorcycles by British champion bicycle racer Jack Pierce, who was the go-to guy for bicycle board racing tracks. His Los Angeles Coliseum Motordrome, was a wickedly fast .28-mile saucer made from lumber planking set on edge and banked 20 degrees. It was merely a bicycle velodrome expanded to twice its standard length.



Above: Indian, Merkel, Excelsior and Harley-Davidson are among the great American marques featured at the 2010 Pebble Beach Concours d'Elegance.

Right: As in bicycle racing, slipstreaming was necessary for success on the board tracks. Here, three riders practice that art.

Left: William Lyons seated on his Harley-Davidson in 1921. Lyons attached a Swallow side car to this actual motorcycle, a combination that would lead to the creation of the Swallow Sidecar Company and eventually Jaguar Cars Ltd.

Below: Riding this Reading Standard 1000 cc V-twin at the Los Angeles Coliseum Motordrome, Ray Seymour lowered the one-mile record to 47 seconds at 76.6 mph.

Pierce made a good living designing these tracks and soon expanded them for use by automobiles; he partnered with Fred E. Moscovics, who would go on to become President of the Stutz Motor Company, to build the first automotive board track—a one-mile oval in the Los Angeles suburb of Playa del Rey.

Pierce was soon working his magic around the country, walking undeveloped fields in suit and derby, laying out board track courses intuitively. One signature of Pierce's stadiums was that the spectator areas were on top of the steep banking, allowing the crowds to look down on the racers.

Before the board tracks ran their course, the milieu created national sports heroes such as Jake DeRosier, Paul "Dare Devil" Derkum, Eddie "Texas Cyclone" Hasha, Albert "Shrimp" Burns, Don Johns and Joe Petrali, who later went on to set an American motorcycle land speed record. The board tracks were built up to two miles in length and some were banked over 60 degrees. Speeds rose exponentially. Lee Humiston recorded a 100 mph lap—a closed course record—on an Excelsior direct drive at the Playa del Rey board track in 1912, and Otto Walker's Harley became the first motorcycle in the world to average over 100 mph in a race. At a one-mile board track in Fresno, California, in January 1921, he won 10-, 15- and 50-mile events at over 103, 104 and 101 mph, respectively. Tommy Milton's average in that year's Indianapolis 500 was 89 mph.

Racing was by this time a primary form of advertising for motorcycle manufacturers, most of whom had factory racing

Right: The 1912 Marsh Metz V-twin. Charles Metz of the Orient Motorcycle Company merged with David Marsh of the Marsh Motorcycle Company in 1905, creating the American Motorcycle Company—and the Marsh Metz was born. Metz is credited with being the first to coin the term "motor cycle."

The George N. Pierce Company began building bicycles in about 1886 and motorcycles in 1909. The first Pierce motorcycle was an unusual and expensive "vibrationless" 4-cylinder and was swiftly followed by a much more successful single cylinder machine like this belt-driven model. The unique 3½-inch frame tubes housed the bike's oil and fuel tanks.

along with the amazing speeds engendered by the banked board tracks led to impressive advances in both speed and reliability.

It is often written that the high speeds, and the attendant accidents that killed riders and spectators alike, led to the end of motorcycles on board tracks, but there was another contributing factor: the wood weathered quickly. It was intended to be replaced annually in areas where weather accelerated rot, but few promoters went to the expense. As a result, there were often holes and other dangerous irregularities in the tracks. Errant kids would climb on the understructures and pop their heads through the holes for a better view, occasionally terrifying a rider. The deterioration of the board tracks affected the bikes more than the cars so motorcycle sanctioning bodies banned bikes from the boards in 1928. For the next quarter century, the top motorcycle races took place on oval dirt tracks except for a few road races. Road racing would flower here later, with the creation of purpose-built courses beginning in the mid-1950s.

The factory battles continued after racers abandoned the board tracks and moved to dirt ovals. One of the highlights on the field is a collection of four Indian Sport Scout racers from the 1930s and 40s that were created for this type of competition. The assembler of this collection was a Studebaker development engineer with the unlikely name of Buck Rogers. He purchased the first, a 1937 Sport Scout, in 1949 and with the help of famous tuner Art Hafer built a potent racer. The next year, Rogers bought two 1941 Sport Scouts with consecutive serial numbers and went through the process again. He sponsored younger riders by providing gas, travel money and the exquisitely prepared bikes, all painted Commander Red, a Studebaker color. In 1953, he joined the fun when he bought another 1941 model, modified it, and raced it himself. After the Springfield Mile in 1955, the bikes returned to Rogers' shop, the door was locked, and Rogers went on to other interests. Larry Feece found the bikes in the hands of another motorcyclist in the late 1980s and traded a modern Yamaha Z Max for them. Researching his new brood, Feece found Buck Rogers who told his story, remarking, "Studebaker had a factory motorcycle team, they just didn't know it." After Rogers died, his widow called Feece to offer a huge cache of spares. Feece has kept the bikes and their spares together over the years. To call this collection unique would be an understatement. It is a veritable rolling museum of 1950s Heartland motorcycle racing.

Top left: Oliver Godfrey won the 1911 Isle of Man Tourist Trophy race on an Indian in 3 hours, 56 minutes and 10 seconds at an average speed of 47.63 mph. Indians came in first, second and third that year.

Top right: Maldwyn Jones with a 1913 Merkel racer outside the factory in Middletown Ohio. Merkel developed the monoshock rear suspension, a system still used by motorcycles today, which led to its slogan "All roads are smooth to The Flying Merkel."

Straight-line speed trials became popular on the dry lakes of Southern California, and the endless stretches of dried salt at the Western edge of the Great Salt Lake at Bonneville, Utah, eventually became the world capital of these endeavors. On display today is the 1920 Indian Scout that motorcycling legend Burt Munro used on his ten trips to Bonneville from his native New Zealand. In 1967, when he was 68 years old, he set a final class record that still stands. His remarkable story was told in the movie *The World's Fastest Indian*, with Munro played by Anthony Hopkins. You can't miss the bike; it looks like a large red fish.

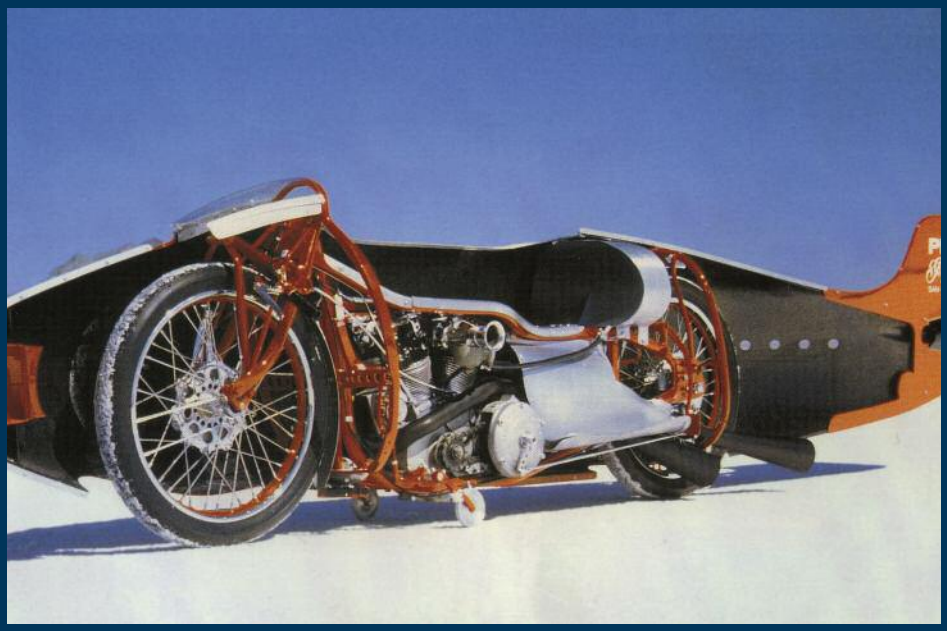
As the years passed and American motorcycles matured, enthusiasts became more interested in the recreational aspects of two-wheelers than in basic transportation. This led to the creation of more sporting high-performance street bikes for this emerging market. Prime examples were the Indian Sport Scout, introduced in 1934, and the 1936 Harley-Davidson EL 1000 cc overhead-valve V-twin "Knucklehead." But even these two revered models were overshadowed by one of the greatest American motorcycles ever produced.

Albert Crocker was a Northwestern University–educated engineer who worked for Thor and Indian before becoming an Indian distributor in Kansas City. While working full time, he also took part in competitive events. After selling his Kansas City operation, Crocker moved to Los Angeles where he ultimately set up his own factory in the 1930s. His first motorcycle was a 500 cc single, designed for speedway racing, a specialized form of short track oval racing popular in the United Kingdom, Australia and America. These bikes were immediately successful in the early 1930s, but were eclipsed by British J.A. Prestwich machines by mid-decade.

By then Crocker and his foreman, former motorcycle racer Paul Bigsby, had already turned their attention to producing a no-compromise, large-displacement, overhead-valve V-twin that would be the most advanced motorcycle of its time. Bigsby would go on to become a pioneering electric guitar designer and builder who invented the Bigsby vibrato tailpiece, generically known as the tremolo arm, an innovation licensed to both Gibson and Gretsch.

A two-speed 1914 Yale V-twin.

The Crocker overhead-valve V-twin was cataloged as a 1000 cc model and introduced in 1936, preceding the Harley Knucklehead by a few months. Few options were offered besides different displacements; bikes up to 1500 cc were delivered. The early models had a head featuring hemispherical combustion chambers and exposed rocker assemblies and are generally thought to be the most desirable of the



Above: The World's Fastest Indian. Riding this motorcycle, New Zealander Herbert James "Burt" Munro set an under–1000 cc record at Bonneville on August 27, 1967—a record that still stands today. Munro's Indian Scout was a very early production machine, the 627th Scout to leave the Indian factory. The bike had an original top speed of 55 mph but Munro was not very satisfied with that! In 1926 he decided to start modifying his beloved Indian, often making parts and tools himself instead of having them professionally built. For example, he would cast parts in old tins and make his own barrels, pistons and flywheels. The Indian's original displacement of 600 cc had grown to 950 cc by the time Munro finished with it in the late 1960s. Munro was 68 and was riding his 47-year-old machine when he set his 1967 record. In the nine times he raced at Bonneville, Munro set three records. He also once qualified at over 200 mph, but that was an unofficial run and was not counted.

marque. Later heads had a flat combustion chamber and enclosed rockers. The bikes came in two wheelbases, designated Small Tank (2.5 gallons) and Large Tank (3.5).

The original hemi head engine, combined with an almost square bore and stroke, resulted in a higher specific output than either the Harley or Indian competition. Al Crocker offered a full refund to any customer whose Crocker was bested by another stock motorcycle, and legend has it that he never had to write a check. The over-engineered Crocker was an expensive toy at the time the country was suffering through the Great Depression, so less than 100 of the V-twins were made. Only about a third remain, pushing the price of this icon of prewar American motorcycling into the stratosphere. Two of Al Crocker's masterpieces are with us today, and each is a Small Tank model with the hemi head. Just three such models survive.

At one point, in the late 1920s, there were over 30 motorcycle nameplates in the United States, but the onset of the Great Depression saw this number decline precipitously, and by the beginning of World War II, the American industry was again represented by the pioneers—Harley-Davidson and Indian. The years leading up to the war had seen the maturation of these two companies and they became part of the war effort like other corporate citizens. After the war came the invasion of British motorcycles in the 1950s and the Japanese in the 1960s, with the former ultimately failing and the latter still with us in strength today.

While the original Indian company expired in 1953, the make has been resurrected several times. You can buy a new Indian today, made in a factory in Kings Mountain, North Carolina, but the production numbers are small. Specialist American ateliers also continue to exist. Harley-Davidson, in the meantime, has never been out of production and remains an enduring symbol of American culture worldwide. It is mighty Harley-Davidson that has projected the image of America around the globe in the postwar period. From Clark Gable to Brigitte Bardot to George Clooney and Arnold Schwarzenegger, all have had their romances with the marque. And at the highest level of motorsports, from NASCAR to Formula 1's Michael Schumacher, the Harley is the choice for off-track transportation.

American motorcycles still stir hearts far from their country of origin.

Michael T. Lynch is an automotive historian and author whose work has been recognized by several major awards from his peers, including the Motor Press Guild's Dean Batchelor Award. When not writing or researching, he serves as a consultant to automotive events and collectors.