

SAAH Journal



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SOCIETY OF AUTOMOTIVE HISTORIANS
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Past Issues: can be viewed in the member section of the SAH website, see: autohistory.org.



October 11: SAH Annual Awards Presentation & Banquet, Hershey, Pennsylvania.

October 31: paper proposal deadline for the Tenth Biennial Automotive History Conference. Proposals should be submitted by email to *Arthur W. Jones*, Conference Chair, nomecos@verizon.net.

April 10-14, 2014: the Tenth Biennial Automotive History Conference at the Vail Automotive Innovation Facility, Palo Alto, California.



Cover: engine detail of the above 1899 Orient Autogo Quadricycle, one of three known to survive, pictured here at The Elegance at Hershey. Our main feature in this issue covers cyclecars... a "big cousin" of the quadricycle.

Back Cover: 1938 Alfa Romeo 8C-2900B Spider, just a few yards away from the 1899 Orient on the field at The Elegance, but miles apart in engineering. In the last issue of the *SAH Journal* we reviewed *The Stewardship of Historically Important Automobiles*, and almost on cue, this unrestored Alfa Romeo won best of show at The Elegance; perhaps the first time an unrestored car has taken the top award at a major concours d'elegance. Going forward; unrestored cars will make us ponder "historically important" or just "finest original."



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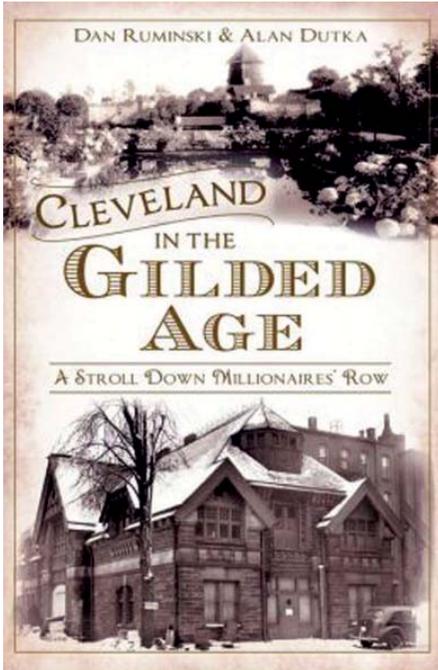
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Join, renew and more right on-line!

Billboard

Offered: by *Thomas Saal:*
Cleveland In The Gilded Age, A Stroll Down Millionaires' Row
By Dan Ruminski and Alan Dutka
History Press, Charleston, SC
156 pages softbound, \$19.99
ISBN: 9781609498788



Although not specifically automotive, this slim volume may be of interest to SAH members because of the last of its five chapters, titled "The White Family, Sewing Machines, Trucks and Polo Matches." I say this because the definitive history of the company has yet to be written, and this book might be a good starting place for anyone

wanting to take on the task. I don't have the time or inclination to write the story myself, but I'll be glad to lend my copy to the first SAH member who shows an interest.

Chapter 1 explains the title, the author(s) citing the *New York Tribune* which published a list of America's 68 wealthiest individuals on February 11, 1892, 53 of whom lived on Cleveland's Euclid Avenue, known at the time as Millionaires' Row. Chapter 2 is titled John D. Rockefeller: The Paradox of Profit, Chapter 3 is The Mansions of Wickliffe, Chapter 4 is Francis Drury: Oil Stoves and Theatians, and Chapter 5 traces the careers of every participant in the early history of the White family's various industrial endeavors, starting with Thomas Howard White and Rollin Charles White who, oddly enough, shared no blood relationship, and continues with the four sons of Thomas H., namely Rollin H., Windsor T., Walter C. and Clarence G. White.

Before quitting automobiles in favor of trucks and buses after WWI, White steam cars had the distinction of being favored by Presidents Theodore Roosevelt and William Howard Taft. Although not included in the book, I believe vestiges of White Motors are still in business if you consider the truck and tractor derivatives being built by companies that purchased various holdings after 1964 when the company was White Consolidated Industries.

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Wanted: CAR BOOKS. Send an email to receive a "Title Priced Want List" from Warth Motor Book Buyer.

Contact: Tom Warth, +1.612.801.5335
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Wanted: Contributors for the *SAH Journal*. The editor greatly appreciates those that have stepped forward, but we need more, *now is the time to engage!* Please contact your editor directly. *Thank you!*

Wanted: A new edition of the Dalton Watson book, *Rolls-Royce in America* by John W. de Campi is being prepared. The book will be faithful to the original, but with extensive changes to the tables and much additional material, including lists of cars with first delivery to America and an update on Rolls-Royce US models and history since the original publication in 1975. The aim is to cover the subject as exhaustively and inclusively as possible. If you have material (photographic/printed), information (sources/contacts) relevant to the history of Rolls-Royce in America, please contact your editor. *Thank you!*

For Sale: *Automotive Climate Control 116 Years of Progress*. A comprehensive history of automotive HVAC systems. Paper bound, 524 pages, more than 600 images, time span 1897 to 2013. Available at all on line booksellers \$43.50 for printed version. CD available exclusively from author \$12.00 free shipping. *Contact:* Gene D. Dickirson, gdickirs@yahoo.com.

Save the Date: The Society of Automotive Historians is holding its Annual Meeting of Members & Gala Awards Banquet on Friday, October 11th at the Hershey Country Club. Deadline for banquet reservations is September 30th. For details, visit the website: autohistory.org. Our tent will be in the Orange Field at Hershey (OBB 17-19).

Save the Date: The Society of Automotive Historians in Britain is holding its Autumn Seminar and AGM on Sunday, October 20th at the Hunt House (RREC HQ) in Paulerspury. Their dinner has been arranged for Saturday the 19th at the Best Western Hotel in Buckinghamshire. For details and contact information, visit their website: autohistory.org.uk.

SAH Journal • May / June 2013

Society of Automotive Historians in Britain
for all those interested in any aspect of motoring history

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Autumn Seminar and AGM, 2013
Sunday 20th October at the Hunt House, Paulerspury – further details to follow

A dinner has been organized for Saturday 19th at the Best Western Hotel, and for those staying at the hotel a package can be booked (mentioning the SAHB) for £82 (dinner/drink/breakfast at):

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SAHB Times, summer 2013 issue, replacement for page 19
Unfortunately, issue 73 for Summer 2013, has page 18 repeated to become page 19. Click on the link below to see a copy of the true page 19.

Welcome
The Society of Automotive Historians in Britain (SAHB) is a 'Chapter' of the Society of Automotive Historians (SAH) (<http://www.autohistory.org>) founded in USA in 1969 to: 'encourage the research, preservation, recording, compilation, and publication of historical material concerning the development of the automobile and related subjects from its inception to the present day, throughout the world.'
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1914 Trumbull Cyclecar

THE SHORT HAPPY LIFE OF THE CYCLECARS

The years 1910-1915 saw a new phenomenon flare across the automotive scene like a blazing comet—the cyclecar, a small lightweight vehicle priced for the masses. It gave rise to such exciting promise that droves of new companies sprang up during the fad's few years of existence, lured by the cyclecar's low manufacturing costs and easy entry into the automotive market. In fact, it seemed as if anyone could start a cyclecar company since most did not anticipate high volume production at the early stages which meant there was no need to invest in high cost production machinery, build a large factory, add a huge staff nor accumulate and warehouse a mass of expensive materials.

How does one describe a cyclecar? Very simply, it was a two-seat caricature of a standard passenger car, lean on amenities, low on price, and its advertised miles per gallon numbers were unmatched by most conventional automobiles. More precisely, it was a cross between a motorcycle and a small car. Its body configuration and skinny tread were its most distinguishing features, the bodies being either tandem seating (one passenger seated directly behind the driver) or side-by-side seating. An air cooled V-twin engine usually powered the tandem models; a four-cylinder engine, the side-by-sides. Shaft drive was a rarity; most were equipped with friction transmission and either belt or chain drive. The typical tread of a cyclecar was 36 inches, which was its most identifiable characteristic as well as its selling price—ranging in the United States between

\$365 and \$400, well below the \$525 cost of a 1913 two-passenger Model T runabout.

The cyclecar phenomenon was born in France and England several years before it reached the United States. The year was 1910 and oddly enough three different groups, working independently of each other, finally were satisfied with the prototypes which they had been developing for a vehicle to avoid the taxes being levied in France and England on standard motor cars, and formed companies to produce them. The result was a two-passenger vehicle that was neither motorcycle nor conventional automobile—one that filled a gap that existed between the two. In France, the answer was the Bédélia; in England it was the G.N. and the Morgan. Which came first has yet to be resolved although most historians lean toward the Bédélia. In any event, the story how each of the three combined to create the cyclecar craze is worth the telling.

When the Bédélia first reached the public, it turned heads wherever it appeared. It looked like a wooden coffin on wheels with the driver and passenger seated in tandem, the driver being on a raised seat in the rear position. Its creators were Robert Bourbeau and Henri Devaux, both only 18 years of age. Their goal was to construct a prototype under 350 kg (772 lbs.) that would qualify for a reduced vehicle tax. They completed their prototype in 1910 with financial help from their parents, and then went on to form Bourbeau et Devaux, Paris. Technically speaking, the Bédélia came with a

single cylinder, 3.5 horsepower engine or 10 horsepower V-twin. An enormously long belt transferred power to the rear wheels. Despite its odd appearance, the Bédélia marque existed until 1925, thus outliving just about all the other cyclecars that came along in its wake.

On the other side of the English channel in much the same time frame, Henry Frederick Stanley Morgan was hard at work in the workshops of Malvern College, Worcester, developing a single-seat, three-wheeled vehicle for his own personal use. Once completed, he decided that it had commercial possibilities but in a two-seat configuration, and proceeded to patent his design. Then, with the financial help of his clergyman father, he formed the Morgan Motor Co. Ltd. The Morgan was a well-built vehicle featuring an air-cooled V-twin engine, independent front suspension, side-by-side seating, and a two-speed chain drive. Whether the Morgan should have been classified as a cyclecar because of its three-wheel set up had been disputed then grudgingly accepted in many quarters during the cyclecar years. Morgan's decision to retain the three-wheel set up was commercially advantageous since the government considered it to be a motorcycle, thus exempting it from automobile taxes. The company continues to build a continually evolving three-wheeler today.

Hard on the heels of the Morgan came the third member of the three European cyclecar pioneers—the G.N. The G.N. was the brainchild of two first-year mechanical engineering students—Archibald Frazer Nash and H.R. Godfrey who also kept tinkering with the development of a motor car for their personal use. Working in a stable behind Nash's mother's house and with her financial help, they finally completed a satisfactory prototype in December 1909. When a photo of it appeared in *The Motorcycle* magazine it brought rave responses, convincing the two young men to take it to production under the name G.N. (and incorporated as G.N. Ltd.), which were the initials of their last names. It proved to be a well conceived vehicle with side-by-side seating and weighing only 397 pounds. It featured a Peugeot version of a V-twin engine and belt drive to the rear wheels. An early G.N. was said to be capable of reaching a speed of 60 mph.

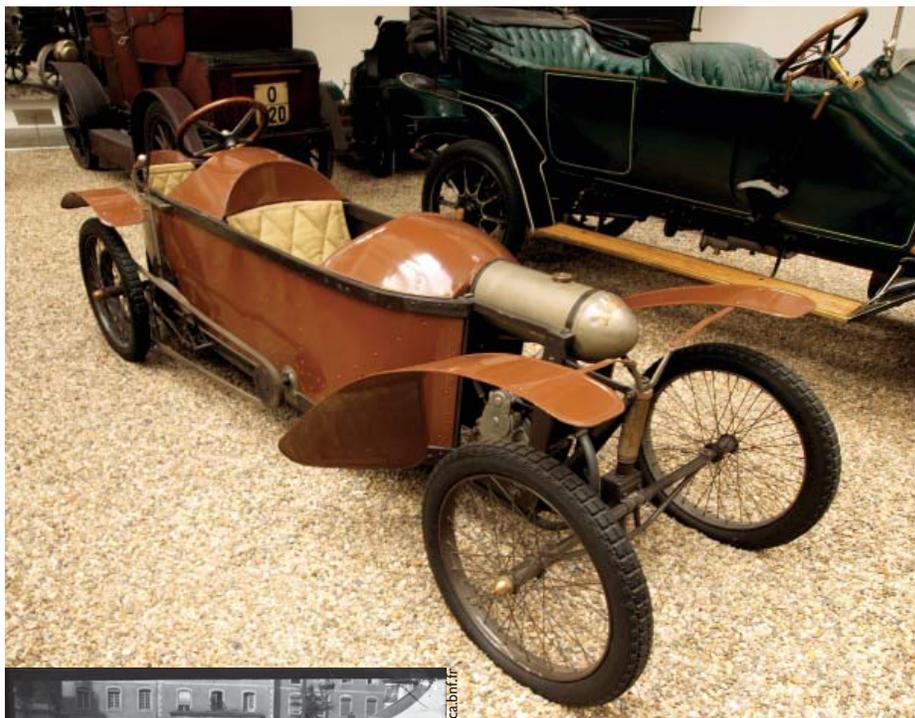
Attracted by the attention the Morgan and G.N. were receiving, other small two-passenger cyclecars began to appear like the Eric, the Girling, the GWK, the Premier

Cycle Co. Ltd., and the Rollo. The growing interest in these small vehicles soon attracted the attention of the Auto-Cycle Union which saw in them a means of attracting new members. In fact it was one of the union's own people, Colonel Lindsay Lloyd, also clerk of the Brooklands race course, who invented the name "cyclecar" when referring to them. The term immediately fell into general usage.

By 1911 fourteen new cyclecar firms had come into existence in England and four in France. Moreover a number of cyclecars were featured in the widely publicized Cycle and Motor Cycle Show at the Olympia. As the cyclecar began to increase in popularity, the Auto-Cycle Union appealed to the *Federation Internationale des Clubs Motocyclists*, which was the ruling body for motorcycle motor sport in Europe, to rule on a definition for the cyclecar. The Federation responded by specifying that cyclecars be classed in either Group 1: Large Class for those with a maximum weight of 772 pounds and engine capacity of 1,100 cc or Group 2: those with a minimum weight of 330 pounds to a maximum weight of 660 pounds, and a maximum engine capacity of 750 cc.

The European cyclecar boom peaked in 1913 when 33 new English firms and three new French firms entered the market. Fueling this burst of interest was the widely advertised first Cyclecar Grand Prix held on July 13, 1913 on the Grand Prix course in Amiens. It covered a distance of 163 miles or fifteen times around a triangular shaped track of 10.9 miles. One of the four Morgan cars entered in a field of 38 led the way with a time of three hours and fifty-three minutes or an average speed of 43 mph. Finishing second, three minutes behind the Morgan was a Bédélia which the judges later declared the winner after they huddled and disqualified the Morgan because it had three wheels which they claimed eliminated it from the cyclecar class. Regardless, both Morgan and Bédélia continued to advertise that one of their cars was the actual winner.

What might have materialized into a growing cyclecar boom in Europe never occurred, thanks to the murder of Archduke Franz Ferdinand of Austria, which precipitated World War I. Of the over 100 cyclecar companies that had sprung into existence to that point, only about eleven survived the war years. Once the war began, the more established companies immediately switched their production to the war effort.



Above and left: Bédélia cyclecar.

Smaller outfits, many literally working out of their backyard workshops, collapsed when their owners and hired help went off to war. Oddly enough, the few companies that did survive the war years included the original three: the Bédélia and the G.N., both of which existed until 1925, and the Morgan, still being produced today after countless redesigns over the years.

News of the early excitement over the cyclecar on the Continent prior to the war was slow to reach the United States. Probably one of the first to show any interest was the Auto Parts Manufacturing Company owned by Alfred Owen Dunk who prospered from buying up defunct early auto companies to provide the owners of their cars with a source for replacement parts. One of Dunk's young engineers, Karl Probst, sailed to France in 1911 to learn what he could about the new cyclecar fad that was making the news. He returned home late that summer excited about what he had seen and convinced Dunk to support his effort to create a prototype of a cyclecar of his own design for possible production. By the beginning of summer, 1912, the prototype was completed. Dunk

christened it the "Do-Do," the pet name of his young daughter Dorothy, and soon was seen driving it on the streets of Detroit. What Probst came up with was a two-passenger vehicle with tandem seating on a 100-inch wheelbase but with a standard 56-inch tread which Probst intended to reduce to 38 inches. Its power source was an air-cooled 9 horsepower V-twin engine with front wheel drive. Attracted by the novelty of the Do-Do's appearance, a reporter from the *Detroit Free Press* tracked Dunk down for an interview during which the owner admitted that he indeed was financing its design and furthermore, thought it could be built for \$255!

Announcement of such a low price for an automobile resonated across the county once the *Detroit Free Press* article was published. Within weeks Dunk was inundated by mail enquiring when the Do-Do would be available for purchase, many including money as a down payment for when the vehicle would reach the market. Another Do-Do, alas, never appeared. Perhaps Dunk could never acquire the necessary funds to begin production. In early 1913 he turned over the rights to the Do-Do to Probst who then allied himself with another gentleman named A.R. Miller, an importer of ball bearings, to seek out the necessary capital to begin building the Do-Do for sale. They ultimately failed and the Do-Do faded out of the scene. Probst, however, did not. He

eventually found himself in the employ of the American Bantam Car Company for whom he helped design the original “Jeep” of World War II fame.

The first to successfully produce and market a U. S. cyclecar may well have been the Manistee Auto Co., formed in March 1912, when it introduced the Autoette. With a wheelbase of only 72 inches, this two-passenger side-by-side was the shortest ever of the breed. It carried a tiny one-cylinder 4.9 horsepower engine that transferred power to the rear wheels via a friction transmission and belt drive. At \$300 the Autoette was quite a bargain. Apparently the public was not yet quite ready to accept such a departure from a standard vehicle. By 1913, when a solid interest was beginning to build in cyclecars, the Autoette was already a memory.

By the end of 1913, twelve new cyclecar firms had opened for business. The names they gave their vehicles make up an odd and amusing collection, sometimes reflected in their size. There were, for example, the Cricket, the Crown, the Dudly Bug, the Falcon, the Fenton, the Imp, the La Vigne, the Mercury, the Twombly, the Woods Mobilette, and the Zip. Three of them came with tandem seating and the other nine featured side-by-side seating. Most carried a tread of 36 inches (almost two feet less than that of a standard automobile). Standouts of this group of twelve were the Imp, the Mercury, the Woods Mobilette, and the Zip.

The Imp often has been referred to by early automotive writers as the first successful cyclecar to reach the U. S. market. Chris Sinsabaugh, in his book: *Who, Me? Forty Years of Auto History*, made that claim. Sinsabaugh, while a member of the editorial staff of *Motor Age* in 1913, had been tracking automotive developments in Europe. News of the rapid rise of the cyclecar industry intrigued him. He assigned a new member of the *Motor Age* staff, William Stout, to investigate whether the European cyclecar fad merited a lead story in the magazine, which led Stout to become an avid booster of the small cars. A designer in his own right (years later he created the legendary Dymaxion car), Stout created a number of different sketches of his vision of a cyclecar which *Motor Age* subsequently published. They caught the eye of W. H. McIntyre who had been building motor buggies. McIntyre commissioned Stout to design a cyclecar that he could place in production. Stout came up with the Imp, which became one of the

most well known cyclecars ever produced in the U. S. The long, skinny Imp featured tandem seating, a 36-inch tread, a 100-inch wheelbase, and weighed only 600 pounds. An air cooled 15 horsepower V-twin engine provided power to the rear wheels through a friction transmission and v-belt. At \$375, the Imp was an attractive \$150 less in cost than a two-passenger Model T.

To prove that the Imp was not a cheap imitation of a standard vehicle, one was taken directly off the production line in Auburn, Indiana during November 1913 and driven to Fort Wayne and back without incident over muddy roads soggy from recent rains. By the end of 1913 the Auburn factory had built 50 Imps and was making plans to ramp up production to 10,000 units by the end of the coming year. Such plans came to naught as cyclecars gave signs of falling out of the public's favor by the fall of 1914 and McIntyre filed for bankruptcy.

The Sensation of the New York Show Will Be the Sensation of the Syracuse Show



La Vigne Cyclecar for 1914

The manufacturer of the La Vigne Cyclecar have produced a car which will meet all the requirements of the great masses who desire a small, light car. The La Vigne will stand up—travels 40 to 45 miles to a gallon of gasoline—is low in tire upkeep and is of beautiful finish.

The manufacturer followed the ideas which have proven the best in standard automobile practice and are best adapted to American road conditions.

Come to the Syracuse show and at a glance you will see features in the La Vigne Cyclecar that are found only in cars of a much higher price. Such things as Heavy Drive Shaft, Axle, Unit Power Plant, Sliding Gear Transmission and Multiple Disc Clutch—these are all high class features.

Don't miss the La Vigne exhibit—it will surprise and please you as it did the visitors at the New York show.

The Car You Can Afford to Own

Vying with Imp for recognition as the first successful cyclecar to enter production was the Mercury. Herbert J. Woodall, later president of Detroit's Woodall Industries, designed the Mercury in the attic of his Detroit home during the fall of 1913. Once the prototype was completed he formed the Mercury Cyclecar Company, producing ten of them by the end of the year. The Mercury had a strong resemblance to the Imp except that it featured an early example of unit body construction in a torpedo-like shape. Otherwise, it offered the distinctive tandem seating body on a 36-inch tread with a wheelbase of 100 inches. Drive was provided by a V-twin 9.8 horsepower engine with friction transmission and v-belt drive. How many were sold in 1914 is unknown. Evidently its claim of being one of the first cyclecar companies to enter the market did not translate into sales. It went into receiver-ship in August 1914.

Another firm that laid claim to being the first in the field was the Woods Mobilette Company. The Woods was a typical tandem

seating type cyclecar with a 36-inch tread and 102-inch wheelbase except that it carried a four-cylinder water cooled engine rated at 12 horsepower. The company made a fetish of advertising the Woods Mobilette as “America's First Cyclecar” and that it could “pass through any ordinary door, into hall, basement, or store.” A pattern of continuous improvements to the vehicle and a price that never wavered from \$380 may have contributed to the company remaining in business until 1916, long after most other cyclecar firms disappeared.

Another 1913 cyclecar entry worth mentioning is the Zip manufactured by the Zip Cyclecar Company of Davenport, Iowa, which was formed in October. The Zip featured side-by-side seating which led to a wider tread of 40 inches. The rest of the vehicle was typical cyclecar: an air-cooled V-twin engine and friction transmission plus belt drive; price: \$395. The company claimed that the Zip was capable of a speed of 40 mph and 40 mpg. The first Zip was road tested a month after the company opened its doors and full scale production was initiated by the end of the year. It received much publicity from the automotive press in January 1914 when Hughie Hughes, a well known race driver of that time, drove a Zip from Chicago to New York, some 628 miles, in the dead of winter so that it could be displayed in the New York Auto Show. Hughes left Chicago on Christmas Day 1913, arriving in New York in the early morning hours of January 7, three days before the show opened. It was the longest trip recorded by a cyclecar to that date.

In truth, the New York Auto Show was the venue that cyclecar manufacturers selected as the place for providing the buying public with their first good opportunity to see a cyclecar in the flesh. Until the show, all anyone knew about cyclecars is what they read in the paper or saw via photographs in auto magazines, not an exaggeration since, according to *The Automobile* magazine, less than 100 cyclecars were on the road in the entire country! Tucked in among nearly 500 automobiles on the show floor were the Davenport, the Imp and the Twombly (all tandem seating models) and the La Vigne and the Cornelian (two side-by-side types, both from Michigan). Of the five only the Imp actually was on the market. The other four were prototype models whose sponsors could only give vague estimates as to when they would be in full production although the Blood Brothers stated that they already

had completed 25 Cornelians, none of which was offered for sale.

On January 15 the automobile focus now shifted to the Detroit Automobile Show where eight cyclecar companies exhibited their wares—all eight being Detroit firms. Their vehicles included the Mercury, the Cricket, the Little Princess, the Hawk, the Little Detroit, the Malcolm, and the J.B. Rocket. These apparently were only the tip of the Detroit efforts. In the January 15, 1914 issue of *Motor Age* William Stout reported that there were “more than thirty planned cyclecars or light car projects underway in Detroit.” The Rocket was the only one of the eight that presently was on the market, 25 having been sold since the first of the year.

The Rocket itself had an interesting heritage, its sponsor being the wealthy James Scripps Booth whose family prosperity stemmed from the newspaper business. Except for a rocket shape on its hood that housed the fuel tank, the Rocket was a typical tandem seat cyclecar from its 36-inch tread to its V-twin 10 horsepower engine. Booth called it “cheap transportation for the working class” which, at \$385, indeed it was. That being said, the Rocket was one of the better engineered cyclecars of that breed. Entered in the first cyclecar race held in the U.S. on June 13 in Teaneck, New Jersey, the Rocket won every event in which it was entered. Its better quality may have been the reason why as many as 400 were sold in 1914, more than the sales of virtually any other cyclecar company that appeared on the scene. Booth closed down the company at the end of the year without explanation and went on to other things.

The third and most attractive venue for exhibiting cyclecars was the Chicago Automobile Show that opened on January 24 at the Coliseum. Unlike the other two shows, the cyclecars had the entire Wilson building next door to the Coliseum in which to showcase their wares. On hand were the Imp, the Coey, the Keller-Kar, and the Mercury—all featuring tandem seating—plus the La Vigne, the Trumbull, the Rex and the Car-Nation with side-by-side seating. The Imp display was the largest with four models on the floor, and the company made news with its announcement that it now was producing 30 models per week. Not in the Wilson building with the other cyclecars were the Woods Mobilette, the Flagler and the Zip which could be found in showrooms on Michigan Avenue. Also spotted from time to time on the streets surrounding the

Coliseum were the Steco, a Chicago product, and the Dayton from Joliet, Illinois.

As the show progressed thirty cyclecar and accessory firms banded together and created the Cyclecar Manufacturers' National Association. In their first order of business they defined a “cyclecar” as being a vehicle weighing less than 750 pounds, with a motor of up to 70 cubic inches. A vehicle weighing between 750 pounds to 950 pounds with an engine between 70 cubic inches and 100 cubic inches would be classified a “Light Car,” and those between 950 pounds and 1150 pounds with engines of 100 to 125 cubic inches were defined as “Small Cars.” W.H. McIntyre, head of the Imp Cyclecar Company, was the obvious choice as president.



From the big auto shows of January on through the spring and summer, cyclecar manufacturers sprang up across the country like dandelions, all eager to capitalize on what they perceived as an emerging new automotive market. All told some 60 cyclecar companies sprang into life during these months. Detroit led the way with nineteen new entries; Illinois, with sixteen, was a close second. Determining how many actually succeeded in producing a vehicle is difficult to assess since many never made it past the prototype stage, having failed to secure the necessary financial backing to proceed any further. Such failures scarcely ever made the news. For all intents and purposes it did not really matter. After all the excitement they had created through 1913 and 1914, the rapid fall from grace of the cyclecar with

the automotive public was truly amazing. At the end of the year, 75 percent of all cyclecar companies no longer existed. Of those who did survive to see 1915, only three still were in business in 1916.

One of the surviving cyclecars that did reach 1915 is worth mentioning in passing: the Cornelian—a sturdy product made by the Blood Brothers in Allegan, Michigan. The Cornelian offered side-by-side seating, a 13 horsepower, four cylinder, water cooled engine, and a shaft drive on a 96-inch wheel-base package. It was an early example of unit construction, its body and chassis being one piece. What divorced the Cornelian from other side-by-side cyclecars was its 56-inch tread, typical of that of a standard motor car. The Blood Brothers stubbornly refused to narrow the Cornelian's tread to that of other cyclecars in their desire to provide it with good stability. They did something else that gave the Cornelian notoriety: they entered a modified Cornelian in the 1915 Indianapolis 500, the only cyclecar ever to be so honored.

Aside from it being the smallest, lightest car ever to qualify for the race to that point, (at a speed of 81 mph for 23rd position on the grid), the Cornelian had the benefit of being driven by the legendary Louis Chevrolet. Once the race began, the Cornelian edged its way through the field up to the 22nd position after 50 miles, then to 15th by lap 180 when a valve broke without warning, bringing the Cornelian's racing career to an end. Officially it was awarded 20th place, a not too shabby performance for a small vehicle so clearly outclassed by the other cars in the race in terms of size, weight and power.

Unlike 1914 when some 60 cyclecars were introduced, the year 1915 saw only four new entries: the side-by-side B-Z-T from New York, the one passenger Royal from Connecticut, the odd, electric-powered Volta, also out of New York, the last being the Morse whose owner had the effrontery to advertise that since virtually all cyclecars now had disappeared from the scene, the Morse company had the field to itself. The claim was fraudulent since there still were 15 holdovers from the previous two years still in existence, although only five would make it to the end of the year, then fade from the scene early in 1916.

So what went wrong? How did this novel light vehicle which created so much excitement when first introduced to the automotive scene disappear so quickly? One can only speculate. Blame the roads, for one.

Unlike Europe whose major arteries were connected by a myriad pattern of paved roads, such roads in the United States only existed within urban areas. Once leaving the city, dirt and sand roads were the rule, replete with well-worn ruts six to seven inches deep that conformed to the larger tread of standard automobiles, trucks and wagons. A cyclecar, with a tread of 36 to 40 inches had no choice but to travel with one side in the rut and the other outside and on a higher plane. If the driver had to change direction, his only recourse was to brake to a stop, get out of the vehicle, and look for someone to help lift his vehicle out of the rut and point it in the necessary direction. Since most cyclecars were not as sturdily built as standard cars, travel outside of the city under such conditions took a severe toll on their longevity.



tricycleartists.forum.net

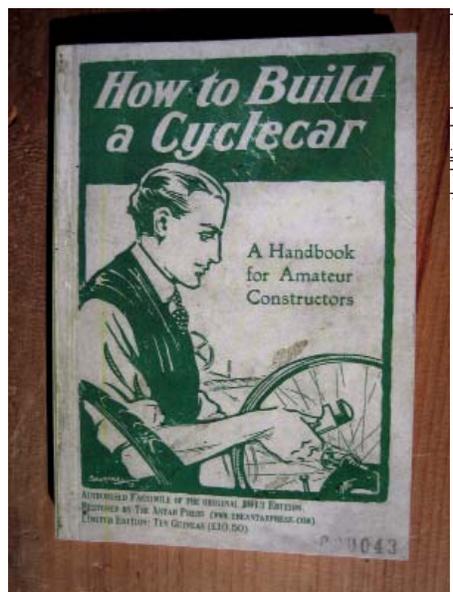
Admittedly the low price of a cyclecar, ranging between \$365 and \$400, was its most attractive feature at the outset. That advantage lasted until Hugh Chalmers, head of the Chalmers Motor Car Company, which built a popular mid-priced car, decided that the public might be ready for a quality-built, two-passenger, low priced standard car. In mid-1913 he formed the Saxon Motor Company and by December his engineers had completed a successful prototype. Chalmers then built a new factory in which to produce it and named his advertising manager, Harry W. Ford, as Saxon's president.

The Saxon came in only one model: a two-passenger roadster with water-cooled, 12.1 horsepower four cylinder engine, solid front axle, and two-speed sliding gear trans-

mission. Whether by intent or by accident, Chalmers situated the Saxon directly in opposition to the cycle car market, not only in price (it sold for only \$395) but also in appearance. Having only a 96-inch wheelbase, it could easily be confused with a typical side-by-side cyclecar like the Cornelian. Harry Ford made a point of advertising that the Saxon was "not" a cyclecar but a "light" car, and that its 54-inch tread was the same as that of a standard automobile. Its low price represented a special challenge not only to the cyclecar industry but to Henry Ford as well whose two-passenger Model T runabout was selling for \$525 in 1913. Whereas cyclecar sales plodded forward through 1914—so slowly that most cyclecar companies folded by year end—the Saxon registered sales of 7,127, probably more than the combined total of all cyclecar companies. In 1915 Saxon output rose to 19,000 in stark contrast to that of the Cornelian, one of the few remaining cyclecar firms still standing, which was finally put to bed before the year was out after only 100 had been built. Any hope that the cyclecar fad could be resurrected again went by the wayside in 1916 when Ford Motor dropped the price of its two-passenger Model T runabout to \$390, probably more in recognition of the challenge now presented by the Saxon whose sales jumped to 27,800 for the year.

Thus the cyclecar boom ("boomlet" might a better term) came to an end but only after the excitement of seeing so many new auto firms formed in so short a time with so much hope, then come to utter collapse so quickly as to defy belief.

—Anthony J. Yanik



theoldbicyclerestaurant.co.uk

ROSTER OF U.S. CYCLECARS BY STATES AND YEARS IN PRODUCTION

- CALIFORNIA: Kupfer (1914), Los Angeles (1914)
- CONNECTICUT: Royal (1915), Trumbull (1914-15)
- DELAWARE: Diamond (1914-15)
- ILLINOIS: Ceco (1914-15), Coey (1914), Dayton (1914), Eagle (1914-15), Frederickson (1914), Keller-Kar (1914), Logan (1914), Pioneer (1914), Puritan (1914), Robie (1914), Sprite (1914), Steco (1914), Standard (1914), Ward (1914), Woods-Mobilette (1914-16)
- INDIANA: Comet (1914), Fauber (1914), Hoosier Scout (1914), Imp (1913-14), Real Cyclecar (1914)
- IOWA: Zip (1913-14)
- KANSAS: Wichita Falls (1914)
- KENTUCKY: Crown (1913-14)
- LOUISIANA: Mino (1914)
- MASSACHUSETTS: Bantam (1914), Mohawk (1914-16), Peter Pan (1914-15)
- MICHIGAN: Arrow (1914), Autoette (1913), Beisel (1914), Cornelian (1914-15), Cricket (1913-14), Dudley Bug (1913-15), Fenton (1913-14), Flagler (1914), Gadabout (1914-15), Hawk (1914), J.B. Rocket (1913-14), La Vigne (1913-14), Little Princess (1913-14), Malcolm-Jones (1914-15), Mercury (1913-14), Rex (1914), Saginaw (1914), Sharp (1914), Tiger (1914-15), United (1914)
- MINNESOTA: Brasie (1914-16), Continental (1914), Stickney (1914)
- NEW JERSEY: Remington (1914-15), Ritz (1914-15)
- NEW YORK: B-Z-T (1915), Burrows (1914-15), Chatauqua (1914), Crowther (1916-17), Dart (1914), Dunn (1916-18), O-We-Go (1914), Twombly (1914-15), Volta (1915-16)
- NORTH CAROLINA: Ashville (1914)
- OHIO: Arrow (1914), Cleveland (1914), Greyhound (1914-15), Robe (1914-15), Xenia (1914)
- OREGON: Portland (1914)
- PENNSYLVANIA: LuLu (1914-15), Morse (1915-16), Peters-Walton (1914)
- RHODE ISLAND: Economy (1914)
- TEXAS: Hall (1914-15)
- VIRGINIA: Cub (1914), Falcon (1913-14)
- WASHINGTON: Elbert (1914-15)
- WISCONSIN: Billiken (1914), Vixen (1914-16)



THE AUSTRALIAN MOTORLIFE MUSEUM

As a recent recruit to the SAH and a committee member of the above named museum I thought it appropriate to forward a brief report on the history and activities of this Australian facility.

While there are many other museums around, some of which are no more than a small collection of cars in a shed—open to public viewing for a few dollars—there has generally been the view that the National Motor Museum at Birdwood in South Australia was the biggest and best. Now there is a new museum that is gaining recognition with a broad selection of exhibits. Tucked away in a rural setting near Wollongong, less than 2kms from the freeway north to Sydney is a neat grey building, home to one of the best car and automobilia collections in Australia.

The Australian Motorlife Museum came about because of the efforts of a dedicated few volunteers, who had managed to erect a smaller brick building to house what was then a collection of signs, petrol pumps, tools and other artifacts, later augmented by a dozen or so cars and motorcycles. Initially named the Illawarra Motoring Museum, it pretty soon outgrew these premises.

Meanwhile, Paul Butler (a keen collector from Sydney) was planning to open a museum when he passed away suddenly, leaving his premises in some disarray. The named beneficiary, albeit with some heavy-weight conditions, was a national heritage organization. The Executors of the Butler estate, in early 1993, encouraged IMM to

apply to become a beneficiary. Coincidentally there were plans to erect a larger building at Wollongong, which would provide a home for the existing exhibits, plus the Paul Butler collection. A process began to secure a site and Wollongong City Council purchased a 50-acre site to serve as a community recreation park, and several community based clubs have now established headquarters there, including the museum. The Butler matter was dragging through the Supreme Court, but was finally resolved in the museum's favor in March 2009.

Renamed the Australian Motorlife Museum, the museum opened to the public on its new site in August 2008. The museum now has a 3200 sq.m space which includes a storage and conservation area, and the Brabham function room. In June 2010, Sir Jack along with Lady Brabham attended the opening of the function room named in his honor. They were accompanied by Ron Tauranac who was Brabham's partner in his long racing career designing and engineering the many Brabham race cars before going on to

continued on page 14



1914 Fiat

Book Reviews

Lunches with Mr. Q: An Auto Industry Titan on Business, Life and Sports Car Dreams

by Kevin Nelson

Southampton Books (2012)

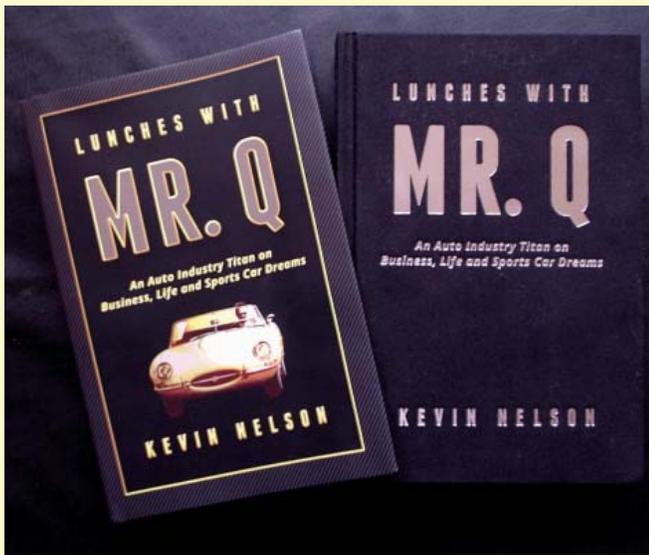
224 pages, 9.25" x 6.25" hardbound,

37 color and 35 b/w photographs

Price \$19.95

ISBN-10: 0978634055

ISBN-13: 978-0978634056



How do you begin exploring a book? Do you sometimes begin at the back? With *Lunches with Mr. Q* your reviewer began by first looking in the back out of curiosity. Already familiar with its subject, Kjell Qvale, I wanted to see what aspects of his career, and what other people I was soon to be reading about. Discovering no index and no bibliography provided a clue that *An Auto Industry Titan on Business, Life and Sports Car Dreams* was not going to be the “usual” biography.

But then the author Kevin Nelson, with 20 published books to his credit, isn't one you'd usually refer to as an automotive writer either. That said, one of those prior titles, published in 2009, was automotively oriented and it's a bit odd that book, *Wheels of Change*, was never reviewed for *SAH Journal* readers as it had earned an SAH-related

book award*. In turn, *Wheels* was directly responsible for Nelson's subsequently being introduced to Kjell Qvale.

Happily, though decades and life experiences separated Nelson from his subject, the two men found common ground and numerous lunches ensued. The story Qvale related is offered to the reader in the style of a memoir as Qvale told it but written first person from Nelson's perspective in his own voice. This permits him to describe his research independent of those conversations although sometimes he only makes oblique mention of a paper or book consulted thus making me wish more than once a proper bibliography had been included.

Wheels of Change had been written at the behest of officers and members of the California Historical Society, which is credited as co-publisher. Nelson described it as “... the most challenging and compelling project I've ever done.” The realm of auto history was virtually unknown territory for him prior to him researching what its subtitle neatly describes as *The Amazing Story of California and the Automobile*.

In the main, *Wheels* is a wonderfully readable history certainly deserving of the Valentine Award. Yet covering seventy-plus years, 1890s to 1960s, coupled with Nelson's prior lack of familiarity with the topic left him vulnerable to something nicely expressed by the author of a biography on a completely different topic. Alister McGrath wrote in his 2013-published book about CS Lewis:

[Often] researchers no longer read books from cover to cover, they use search engines to find words or passages. But this approach has made researchers less sensitive to the deeper structures and inner logic of the texts . . . and . . . less likely to make the “unexpected discoveries which come from serendipity.” . . . what once took time to learn by [gradual] accumulation can now be achieved with moderate diligence in the course of a morning.

That brought to mind a letter to the editor published in *Journal* #260. The letter's writer suggested there should exist a repository where correctness of anything could be verified. Of course the fallacy is, cultural

and language differences aside, *someone* is still required to fact check the facts and the already huge volume of information grows continually.

Each of us live our lives one day at a time. But when we are getting acquainted with someone, we share stories of things we've learned or experienced in random order. And that's how Kjell Qvale, very much a self-made man, shared his story with Kevin Nelson and how, in turn, Nelson tells it to us.

Qvale's story is auto-centric because from the time he arrived in America in 1929, he was determined to “make a business out of his romance with cars.” A very much abbreviated enumeration of Qvale's activities includes co-founding the Pebble Beach Road Races, then co-founding the San Francisco (new car) Auto Show. The moniker he gave his company, British Motor Car Distributors Ltd., is descriptive of its function and a clear indicator of the nameplates he carried, from Rolls-Royce and Bentley to MG and all in between. But there were also some decidedly non-British marques BMCD sold too including Porsche, VW, and Mercedes-Benz. A motorsports enthusiast, Qvale found a way to work and play in that community by forming another branch of BMCD in conjunction with Joe Huffaker which they called the Competition Department. All of the foregoing is but a tip-of-the-iceberg description of the fuller story told, and told well, in *Lunches With Mr Q*.

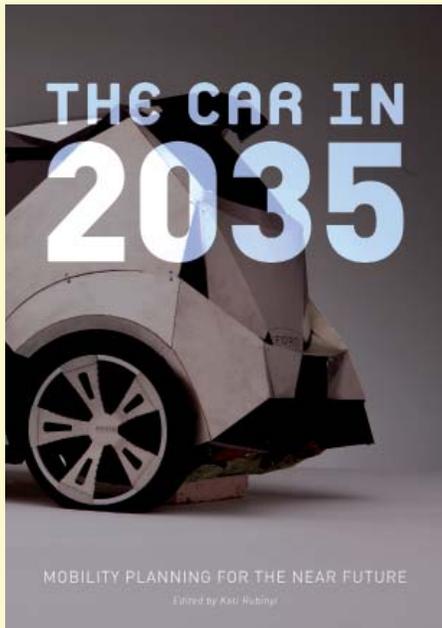
The book is as fine in presentation as in the writing. As the photo shows the dust jacket (on left) and book are equally handsome befitting the generously illustrated and attractive pages inside. The more amazing is all this obvious quality is priced so reasonably. So what's your excuse for not making the modest investment to purchase it, then investing a bit of your time to read it?

*The book award referred to is given by SAH's SoCal Chapter which named it the Valentine Award, honoring and remembering SAH #307 Jim Valentine. The award, established in 1999, is given to the author judged to have made a significant contribution to automotive historical knowledge in the west, particularly California. Valentine's not inconsiderable literature collection, numbering around 150,000 individual pieces, went to the Horseless Carriage Foundation's Research Library where it can be accessed to this day.

—Helen V Hutchings

The Car in 2035: Mobility Planning for the Near Future

various contributors, edited by Kati Rubinyi
The Civic Projects Foundation,
Los Angeles (2013)
290 pages, 10" x 7" soft cover, 16 b/w, 142
color images with 12 maps/charts/graphs.
Price: \$34.95
ISBN-10: 8415391269
ISBN-13: 978-8415391265



Inasmuch as publishers are businesses and need to be profitable to remain in business, it isn't unusual that several publishing houses simultaneously bring out books on a currently popular subject. In prior years, books about future autos have tended to be light on text, featuring page after page of beautiful drawings speculating on the appearance and other attributes of the car of tomorrow.

The current crop of books on future transportation is quite different. *Strap Hanger*, a 2012 release from Henry Holt and Company, explores future transportation needs. Its writer, Taras Grescoe, arrived at his conclusion that there is no single correct way to *Saving Our Cities and Ourselves from the Automobile* (the book's subtitle) by surveying multiple population concentrations (major cities) the world over. Each chapter presents a different approach yet all share a commonality. Each area found it best to make improvements on the already existing infrastructure for both cultural and financial reasons.

That's precisely the approach the authors of *The Car in 2035, Mobility Planning for the Near Future* propose: pragmatically retaining and enhancing the best of existing infrastructure while concurrently integrat-

ing and utilizing developing technologies in order to provide better mobility for the entire populace.

Each chapter of *The Car in 2035* is written by an expert in the subject being discussed. Those contributors are from a variety of disciplines and perform a variety of functions ranging from professional transportation planners to analysts, educators, architects, designers, and engineers.

The book is divided into three main sections. One focuses mainly on the mode of transportation, as in *The Car*. The next concentrates on the area where travel or commuting takes place, *The Street*. And the last one takes a look at governance and Policy.

Despite being based in scholarship and dealing with a serious topic, the writing is neither dull nor stuffy. Refreshing too is that many of the major points advocated are presented as point and counterpoint so the reader may consider the pros and cons. One premise needing no point/counterpoint is reasserted numerous times by multiple contributors. It will resonate with and be especially appreciated by SAH members: *the past must inform the present and the future.*

Even where bus and/or rail is common, there still must be other types of transport to get individuals to those larger conveyances. The car has dominated, and may continue to, although the authors proffer several viable modifications and alternatives in which individuals actually gain still more personal mobility while concurrently reducing traffic congestion.

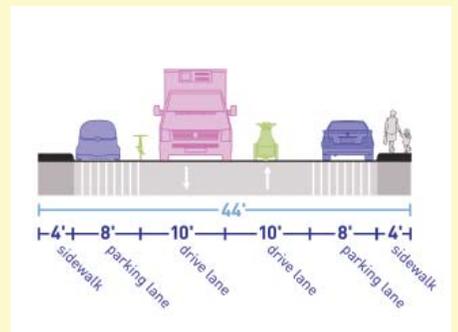


One chapter that appeared whimsical at first glance, on a closer read turned out to be particularly fascinating. Your reviewer will leave it to you to discover the details of an *Orgami Model T*, pictured above, in which is presented an innovative and ecologically responsible way to develop and manufacture personal city cars.

In the foregoing paragraph, notice should be paid to the two words "city cars." The dichotomy or differences between the types of transportation appropriate for

densely populated areas and those that are more rural will grow. Cars for the open road need change very little from those available today whereas modes for individual transportation in densely populated areas will benefit the most from changing the most.

As previously observed, each city's best path to providing for the transportation needs of its citizens is by expanding and enhancing existing infrastructure as opposed to completely revamping. Some areas already have extensive rail and need merely update and expand. Some have a tremendous bus network. Each makes best use of its physical and monetary resources by improving and expanding, not reinventing. But all areas can benefit from the research findings on



how best to create mixed-use roadways such that a single roadway can and does easily and successfully mix buses, cars, bicycles, pedestrians, etc in ways, such as the example above, that are safe, convenient and expeditious for each.

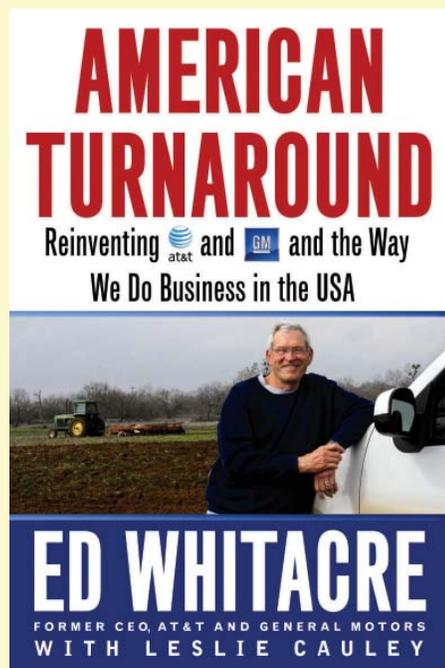
The chapters in the policy section remind the reader of one of the biggest hurdles: resistance to change. An example notes that as technology advances there will be a commensurate shift regarding which party will be held responsible for insurance liability, setting up a situation where the insurance industry and manufacturing alike are resistant. A later chapter's writer correctly notes, changes "... cut against vested specialized interests; car ownership, car manufacturers and/or investors and workers, civil engineers and on and on. . . Change IS tough."

A reality the book doesn't express in so many words is that changes irrefutably will take place. Given that, doesn't it behoove all of us to learn and understand thus enabling each of us to advocate for changes that may be more difficult but are wiser, rather than letting changes that may simply be the path of least resistance take place? *The Car in 2035* can help expand the awareness of any who make the effort to give it a thoughtful read.

—Helen V Hutchings

American Turnaround: Reinventing AT&T and GM and the Way We Do Business in the USA

by Edward Whitacre, with Leslie Cauley
Business Plus (2013)
304 pages, 6.5" x 9.2" hardbound
Price \$28.99
ISBN-10: 1455513016
ISBN-13: 978-1455513017



This review will intentionally focus only on Ed Whitacre's short term at General Motors following his appointment by the Obama administration from June, 2009 until the end of 2010. Whitacre was chosen by Steven Rattner, Obama's Car Czar, for his managerial skills, developed and honed from running the vast AT&T empire, his sole employer besides GM. Whitacre does not provide much insight to the complexities of his GM role, first as only Chairman but later as CEO as well. For instance; there is no comparison of the fast paced telecom industry versus a manufacturing environment where early design work to end of lifecycle can span close to a decade.

About half the book details his modest background, values learnt early in life and an ability to inspire employees at AT&T. Even in the half allocated to GM, a large portion is devoted to his business philosophy and anecdotal stories of Whitacre ambling around the RenCen headquarters and the technical centers, stopping off at random to chat to staff. This started off as a fact finding mission but later transformed into a morale-boosting exercise. These walkabouts were tolerated until the day he wandered

unannounced into Solidarity Hall, the UAW headquarters, to see if he could find his way into Ron Gettelfinger's office. Even Steve Girsky, the GM director looking after the union's investment, cautioned Whitacre on his goodwill mission, but Ed continued to have breakfasts with the union head in some rundown parts of Detroit.

What Whitacre and the new board of GM wanted from the newly minted CEO Fritz Henderson was a new vision and a new management chart to replace the old matrix system of cross reporting. On the one hand, Henderson is described as an encyclopedia of GM and the global car industry, yet he was unable to convey the GM organizational structure to Whitacre's satisfaction. He was also challenged for not simplifying board presentations. This reviewer is left wondering whether Whitacre and the new directors had enough of an understanding of the automotive industry to comprehend what Henderson was telling them. Following Henderson's termination, Whitacre assumed the role of CEO.

Whitacre also seemed unable to appreciate the contribution made by Bob Lutz, Vice Chairman Product Development and one of the most highly respected veterans in the industry. He was simply dismissed as opinionated. Lutz's response to his low assessment can be found in his blog with Forbes.com. [In case you couldn't imagine how Lutz would opine about Whitacre in the Forbes blog (2/28/2013 @ 3:13PM), within few notable nice words, there's this demonstrative sample: "If you believe any of this, I need to talk to you about ocean front property in Nebraska." -Ed.]

Possibly the most revealing disclosure in the book is the manner in which Dan Akerson was chosen to succeed Whitacre. There was no selection criterion, head hunting or such thing largely because TARP (Troubled Asset Relief Program) regulations limited remuneration levels. Akerson simply volunteered for the role in a directors meeting and was promptly appointed. Possibly because Mark Reuss, President of GM North America, was Whitacre's recommendation as CEO to the board, he failed to endorse Akerson as his successor.

This book is more about Whitacre and less about GM as far as auto historians are concerned. He is most patriotic about American workers and almost ignores GM's global reach. For instance there is no reference to the last-minute decision not to sell Opel or any other such deliberations (except

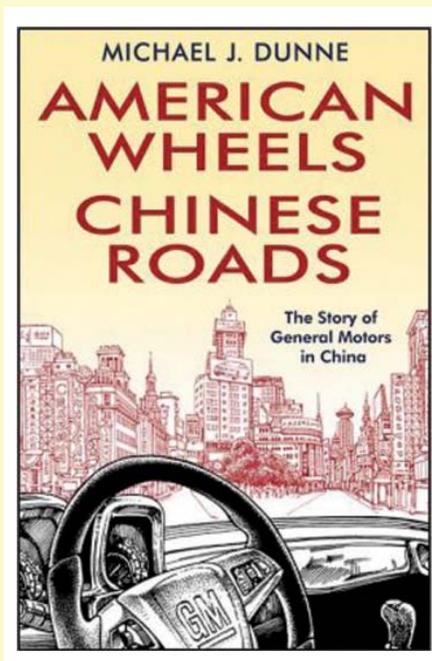
for the fate of Henderson).

What Whitacre does claim credit for is creating a clear accountability structure that he felt would enable GM employees to reach their full potential and erase the low morale and negative perception of the Government Motors label. His contagious upbeat nature is what he and this book will be remembered for.

-Louis F. Fourie

American Wheels Chinese Roads: The Story of General Motors in China

by Michael J. Dunne
John Wiley & Sons (Asia) Pte. (2011)
227 pages, 6.1" x 9.4" hardcover
14 color illustrations
Price: \$29.95
ISBN-10: 0470828617
ISBN-13: 978-0470828618



We have all heard the statistics—in 2010 General Motors and its joint venture partners, Shanghai Auto and Liuzhou Wuling Motors, sold 2.3 million vehicles in China, topping sales in the US. They were the leaders in market share and had achieved this the year after GM passed through negotiated bankruptcy in Detroit. Competitors were not a problem; the wide open Chinese market brought them into competition with 83 foreign and Chinese brands, but led to hundreds of millions of dollars in profits. The way forward from the company's first contacts with the Chinese government had been arduous requiring five years to the signing of the JV agreement, and then an additional year and a half until the

first Buick Century came off the line.

Michael Dunne is a business consultant and writer, a native of Detroit with twenty years' experience studying the explosive growth of the Asian automobile market at close hand. He describes the business culture of China founded on pervasive government control yet leavened with traditional personal relationships at every level. GM was fortunate in its choice of leaders, especially general manager Philip Murtaugh. A quick learner, his flexible free-wheeling style brought success in an environment very different from the typical American corporate culture. The author leads us through decision points for matters of large and small consequence and the weight of some can seem baffling to westerners. The ways of the early automotive pioneers, Billy Durant and Walter Chrysler, could have been his inspiration. Alfred Sloan might not have fitted so well in the Shanghai of our times.

When GM entered, the Chinese automotive market was principally sales to corporations and public agencies. For this the big black Buick was a natural fit, but as the economy expanded and private buyers began to appear, smaller more economical models were essential. It was the Asian financial crisis in 1997 that provided the opportunity

to purchase a Korean producer once owned by GM, now left stranded in bankruptcy. Reacquiring Daewoo with the support of the Korean government, GM gained the ability to build high-quality small cars at competitive prices. Their Buick badges carried the prestige sought by the Chinese customer.

China's stated long term strategy is to build its own automotive industry and it remains to be seen how and when the policy will be fulfilled. The story that Michael Dunne tells so well is therefore not yet complete but it is fascinating to see how creatively GM has responded to the opportunities of the Asian market. This is not the rational committee-driven General Motors of the past. Are there lessons being learned in China that might stand the corporation well in its home country in the future?

—Arthur W. Jones

Autoblog. GM is expecting to export between 100,000 to 130,000 Chinese-built vehicles this year. In addition, GM plans to add 400 dealerships in 2013 to its already existing 4,200, and it hopes to expand further to 5,100 dealers by 2015. Overall, GM will spend \$11 billion by 2016 on new plants, products, and staff in China.

Over the next five years, GM will introduce nine new sport-utility vehicles on top of the five it sells in China at present, according to Bloomberg News. Each year through 2016, it will debut a new Cadillac model to boost sales of its luxury vehicles. "We're confident about playing here in China," Bob Socia, GM's China president, told Bloomberg. "We're here for the long term and you've got to lead and be strong in your commitment. We're very bullish."



Text and photo: *China Business Review* May 2, 2013 edition, via: www.chinabusinessreview.com

General Motors Announces Expansion in China

At the Shanghai Auto Show on April 20, General Motors Co. said it would build four new plants in China by the end of 2015, which would give GM the capacity to produce about five million vehicles per year, according to



www.racemaker.com

Tommy Saal's ABC of Auto Racing History

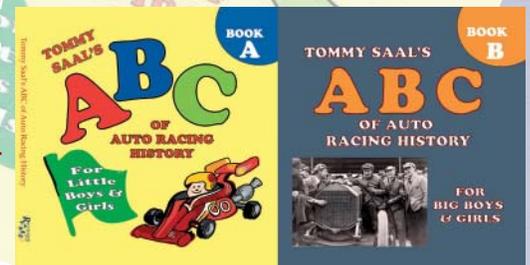
Here's a book about auto racing history with a difference, one that's written and illustrated to appeal to people of all ages even if they're not racing fans in the first place. Tommy Saal's ABC of Auto Racing History is unique in that it's really two books in one. Book A features cartoons in color with versified captions to be read to or read by kids. The flip side is Book B that explains to young adults, racing neophytes and parents of kids with questions the stories behind B for Bonneville, D for Daytona, I for Indianapolis, L for Le Mans, S for Sebring and so on through the alphabet from A to Z without being too technical.

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1924 Morris



1927 Rover



1924 Lanchester



1929 Rolls-Royce 20 hp (GFN58)



1928 Rolls-Royce 20 hp (GBM55)

found the equally successful RALT marque.

Exhibits relating to the earliest Australian pioneers include parts of the 1902 McIntosh (William McIntosh is believed to have built his first car in 1893), and the efforts of Alfred Swinnerton, who built at least two cars in 1907 and 1915 which were of monocoque construction long before the Lancia Lambda appeared. Other Australian built cars including a Summit and a Lightburn Zeta are parked nearby. It is envisaged this display will continue to grow with further research and acquisitions.

The earliest running car on show is an original 1909 Ford T (soon to be usurped by something even older) whilst the oldest running motorcycle is a 1905 Triumph "motor bicycle." The bicycle collection commences with a c1900 Massey Harris, and includes a Moulton, a three seater from the 1950s, and several penny farthings among others.

Work proceeds on a 1919 Republic truck, and a 1929 Sunbeam Salmon Sunshine saloon, both of which are near completion. Many other smaller items such as petrol pumps, typewriters (back to 1880s), gramophones, mechanical scales and more are exhibited at Motorlife. The philosophy here is that these items developed in a technological sense in much the same timeframe as the motor vehicle, and all had an impact on the way we live our lives. These displays do much to provide perspective. Enamel signs are a feature, with hundreds on display, alongside other automobilia, but the majority of space is occupied by the motor vehicles.

Motorlife is entirely volunteer run, and is open six days every week, closing on Mondays and some public holidays. Our curator is Wendy Muddell, who incidentally was awarded a Medal of The Order of Australia for services to the heritage vehicle movement over a long period, and to the Australian Motorlife Museum.

The catering facilities and surrounding parkland make this site a popular destination for organized runs and rallies; recent visiting groups included Mini, Rolls-Royce, Armstrong Siddeley, Morgan and Datsun Z car clubs.

One striking feature that confronts visitors on arrival is a mural on the front wall. This came about by chance. A couple of years ago a dry cleaning shop in Sydney was damaged by fire and the resulting demolition work revealed a brick wall that had remained hidden for nearly a hundred years. The side wall of what had been a motor

repair business had been painted it appears, in 1911, to advertise Cars For Hire, Waratah Motor Spirit (a product of the Neptune Oil Company) and Perdraiu Tyres but it became an upholstery business in 1915 and soon after was obscured by the addition next door. Alerted by interested parties at the Powerhouse Museum in Sydney, Wendy had a limited time to arrange for the wall to be properly photographed as rebuilding work was imminent; meaning the wall would once again be hidden forever. As it was not possible to move the wall brick by brick to the museum an imitation brick wall was erected next to the main entrance and local sign writing students reproduced the entire mural as a permanent exhibit.

The museum also houses a library which is open to the public by appointment to aid research for writers, students or hobbyists. In an attempt to improve this facility I recently took the liberty of emailing several members for advice on what makes a good reference library, asking what material does, or does not belong and how best to present and promote the library to interested parties. I have to give my sincere thanks to the many who kindly took the time to reply, every one with a slightly different perspective, but all relevant. This is all being discussed and assimilated by the committee and will go some way to helping us achieve our goals. The library policy basically mirrors that of the museum's collection policy, and with a limited budget for acquisitions we have benefited from some generous donations over the years.

Just over half the exhibits are owned by the museum or form part of the Paul Butler collection, while a good selection of cars on loan ensure a constantly changing display. We are anticipating some exciting new arrivals soon, one of which is a significant part of early Australian motoring history. I will keep members informed of any news.

-Chris Martin

Australian Motorlife Museum
Integral Energy Recreation Park
Darkes Road, Kembla Grange
(Wollongong) NSW 2530

Open Tuesday-Sunday 9.30-4.30pm

Curator: Wendy Muddell
Phone: +02.4261.4100
Email: motorlife1@bigpond.com.au
www.motorlifemuseum.com.au



POWER STEERING THE MAN WHO MADE IT HAPPEN

I really never gave too much thought to power steering. As a youngster I enjoyed the feel of non-assisted steering. Every April my father bought a new putrid green Oldsmobile, and none ever had power steering. If someone had asked me when did the first power steering become available, I would have guessed the mid-1950s. Never would I have guessed 1925. It was all because of one man: Francis W. Davis and his loyal assistant, George Jessup.

In 1906 Davis graduated with honors from Harvard University with an advanced degree in hydraulic engineering. He began his work career as a consulting engineer at the Pierce-Arrow Co., Buffalo, New York. After three years he was offered a position in the truck division of Pierce-Arrow, where he met George Jessup. Over time he infected Jessup with his mono-mania for building a workable power steering system, his personal *idée fixe*. He was well aware of what he was getting into. Autos were bad enough, but trucks were a real bear. The larger the truck the more stress and strain was put on each reciprocating connection. Weight added more problems. In the early 1920s pneumatic tires began to replace smooth solid rubber tires, and this increased friction 200%. Pierce-Arrow decided to close down the truck division and concentrate on high end motorcars.

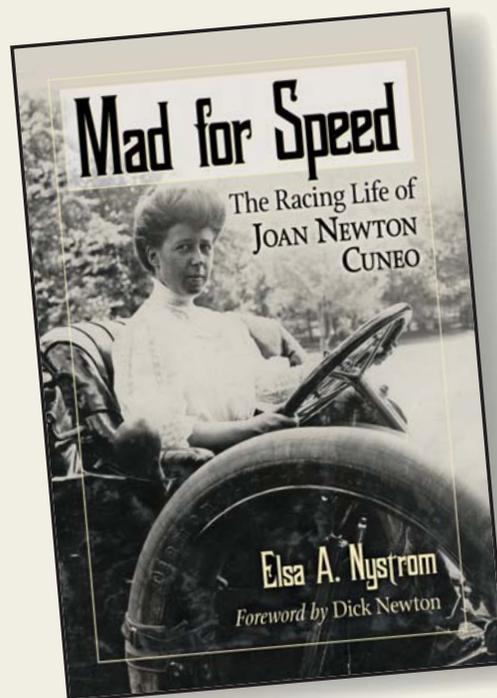
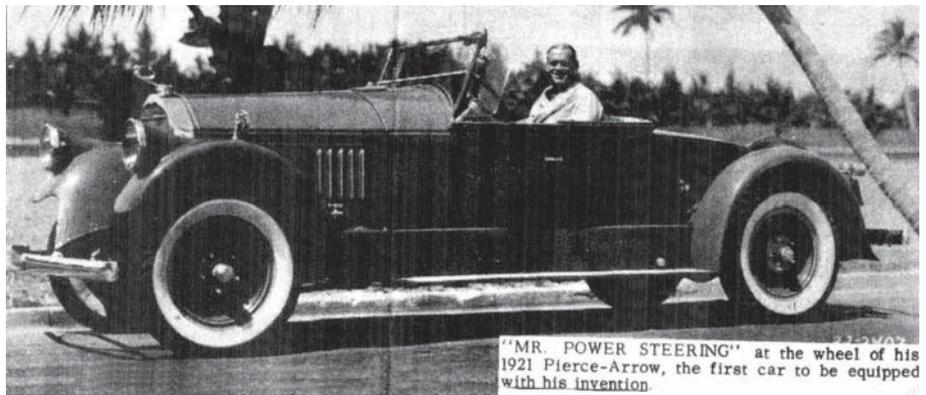
After seven years, Davis resigned from Pierce-Arrow, and took Jessup with him to set up his own shop. Most of his competitors had already fallen by the wayside, frustrated by the seemingly insurmountable engineering hurdles. In fact, Davis threw in the towel a couple of times but always came back to his obsession. There were two major problems yet to be solved, one: oil seal leaks caused by high pressure in the system, and two: scale. Hydraulic equipment was huge; such as hydraulic presses and stamping machines, etc.

They had large oil tanks to keep the pressure low on the seals. Most hydraulic machinery weighed more than a Pierce-Arrow auto. A successful power steering unit must fit under the hood of a car, not be carried behind on a trailer as some engineers believed. Continued hard work began to produce some important results. Davis rethought the problem and changed direction. Rather than use a pressurized closed valve, he developed an open valve system which allowed oil to flow continuously, but when power steering assistance was needed it was closed and pressure was built up. An additional unforeseen benefit, not only did it remove vibrations from the steering wheel but also dangerous steering wheel kick-back. The new unit was

installed in his 1921 Pierce-Arrow in 1925. It functioned even better than expected.

After three months of fine tuning he filed for and obtained a U.S. patent in 1927. He and his partner George Jessup worked to hand build and test five units to launch a demonstration program to auto manufacturers in 1929. Their timing was off, the Great Depression was on. No company was looking for a costly accessory. They turned their attention to heavy duty truck specialty makers, who found the system reduced driver fatigue. In 1938 government work and military bids and contracts kicked in. It was not until 1951 that the company attained real success.

—Fred Summers



This book recounts Joan Newton Cuneo's life and her role (from 1905 to 1915) as the premier female racer in the United States and spokeswoman for women drivers and good roads. It covers her experiences in three Glidden Tours (and includes her notes on the 1907 tour), her first races, and her rivals, as well as the battles for organizational control of racing — which ended in banishing women racers shortly after Joan's greatest racing victories at New Orleans in 1909.

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