

# AUTOMOTIVE HISTORY REVIEW

Summer 2000



Issue Number 36



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Petersen Automotive Museum • Los Angeles, California

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# EDITOR'S NOTES

Once again, the Society brings you an issue of the Review reprising its biennial conference on automotive history. The first two of these were held at the Henry Ford Museum in Dearborn, in 1996 and 1998, in conjunction with the National Association of Automobile Museums (NAAM). Our third conference was held at the Petersen Automotive Museum, Los Angeles, again with NAAM.

This was my third visit to the Petersen, and I came to realize how much of the automotive scene of Southern California this museum has come to embody. The "cars of the stars," to be sure, but more importantly, departures from the mainstream of traditional automotive culture, the art of the modifier as seen in custom cars and lowriders. I kept returning to the display of hot rods in the Bruce Meyer Gallery, especially the '27 Ford Track-T-Roadster from the collection of Peter Chapouris. The simplicity of the stripped tub bodies and the lack of fenders of all these cars emphasized what a grotesque aberration the Prowler is compared with the cars that inspired it. The Museum's temporary exhibit this time was "Art y Estilo," featuring colorful examples of the lowrider cars of Southern California. During Friday night's conference dinner at the Petersen, Director Ken Gross related the success of the exhibit in bringing people to the museum for the first time. I've tried to capture some of the flavor of this in a review of the show's catalogue at the end of this issue.

Under the heading of "Exploring Automotive Culture," the participants discussed aspects of heritage, society, and design. Reprinting the papers and the abstracts helps to memorialize these proceedings but is an imperfect way of capturing the two full days of presentations. Most of the papers were accompanied by slides, some with film, and all with a question and answer period afterwards. What's missing, of course, is the fun and stimulation of the interaction between the presenters and the audience in the informal setting of the rooftop room at the Petersen. It seemed to me that, to a greater extent than in the first two conferences, there was more participation,

more good humor, more information imparted in these interchanges which took place against the backdrop of the Santa Monica mountains on the clear, smog-free days of March 10 and 11 of this year. It will be a challenge to SAH and NAAM to top the third conference.

As with *Review* No. 32 and *Review* No. 34, the contributions of the presenters are represented in this commemorative issue by either the abstracts that were submitted before the conference, or the papers presented at it. The editor has tried to balance the space available with the material, and to choose a broadly based sample to print as articles. Following convention, the initial use of names of SAH members appears in italics.

We begin with "Motorcycles, Model Ts, Buicks, Buses, and 'Boss Ket': Flixible's Early Years (1913-42)," by *Robert R. Ebert*, Buckhorn Professor of Economics at Baldwin-Wallace College, Berea, Ohio. This is a chapter from a forthcoming book Bob has written on the company. A member of SAH and a veteran of all three conferences, he is co-author of *Divco: A History of the Truck and Company* (Antique Press, Inc., 1997). Bob's paper on "Milk Consumption, Milk Distribution and the Rise and Fall of the Divco Truck Company" appeared in *Review* No. 34 (p. 6). At the 1996 conference, Bob spoke on "Medium-Priced Automobile Producers: Technological Change and Consolidation, 1928-41" (See Abstract, p. 52, *Review* No. 32).

Another author interested in the automotive history of his particular home is *Douglas Leighton*, making his second appearance at a conference (See Abstract, "Early Automobile Manufacturing in London, Ontario," *Review* No. 32, p. 62). Douglas is an Associate Professor of History and Chair of the History Department of Huron College, London, Ontario. Since 1992, he has regularly offered History 404E, a full-year honors seminar titled "The Automobile and Modern Culture." You'll find an interesting account of the travails of an early Canadian manufacturer in "Dreaming of What Might Be: William Stansell, London Motors and the London Six 1921-26."

Well into my adult life, whenever my mother deigned to ride with

me, it was usually accompanied by the admonition "Remember, you aren't Barney Oldfield!" That's a name we all know, but who, really, was the legendary driver? One reason why he's legendary is that he was a successful early practitioner of public relations. You'll enjoy reading all about this in "'You Know Me!' Barney Oldfield and the Creation of a Legend," by *Mark D. Howell*, Communications Division, Northwestern Michigan College, Traverse City, Michigan. Dr. Howell is the author of *From Moonshine to Madison Avenue: A Cultural History of the NASCAR Winston Cup Series*. In addition to teaching English, mass communications and popular culture at Northwestern Michigan, he is an adjunct professor of rhetoric, communications, and journalism at Oakland University, Rochester, Michigan. In addition to his biography on Barney Oldfield, Mark is currently writing a book about the racing Bodine family.

An interesting area of automotive culture we haven't really explored is the American interest in sports cars of half a century ago. *Richard L. Knudson* of Oneonta, New York, fills us in on some of the days immediately before and after World War II with "The Birth of the American Sports Car Culture: When Motor Racing was a Sport." Dr. Knudson, Professor Emeritus of the State University of New York, is the author of *M.G.: The Sports Car America Loved First*, and has been the editor of *The Sacred Octagon* since 1979.

As our last article, we move into a topic that may form a significant chapter in the automotive history of the 21st century, with "The Emerging China Auto Market," by *John A. Marino*. John is an Associate Professor, Business Technology, School of Technology, Kent State University, Trumbull Campus, Warren, Ohio. He has taught Management for over 20 years and specializes in employee involvement techniques in manufacturing. This is the third time he has participated in a conference (See "Workplace Culture: The Link Between Production and Quality: The GM Lordstown Assembly Plant 1966-97,"

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**Front Cover: Barney Oldfield at the tiller of the 999**  
(courtesy Mark D. Howell)

**Rear Cover: A London Six sedan, Boer War Memorial,  
Victoria Park, London, Ontario, 1921**  
(courtesy Douglas Leighton)

**Acknowledgments:** Except as noted, the photographs illustrating the articles were provided by the authors. The photographs for "Flexible's Early Years" are used with the permission of Thomas A. McPherson, courtesy of the Mohican Historical Society. In the Abstracts, the photographs for "L.A. Racing Venues" are courtesy of the Phil Harms Collection. The materials in the remaining Abstracts are from the editor's collection, as is the illustration on p. 32.

### Back Issues of Automotive History Review

We can offer sets of the 22 issues remaining in stock (numbers 3, 4, 5, 6, 7, 10, 11, 12, 13, 14, 15, 16, 23, 24, 26, 27, 28, 29, 30, 31, 34, 35) for \$75.00 postpaid in the USA. Single copies are \$5.00 each plus \$1.00 postage, except for heavier #30 which requires \$2.00 postage in USA, \$5.00 postage internationally. All payments in US funds, please, Mastercard and Visa accepted as well as checks. Orders and inquiries should be sent to Fred Roe, 837 Winter Street, Holliston, MA 01746-1159. Make check or money order payable to Society of Automotive Historians, Inc. Inquire for shipping costs outside the USA. This supersedes all previous lists and prices, which are no longer valid.

# Motorcycles, Model Ts, Buicks, Buses, and “Boss Kett”: Flxible’s Early Years (1913-42)

Robert R. Ebert tells us the story of a regional manufacturer  
which produced a wide variety of motor vehicles.

How did a company in the small town of Loudonville, Ohio evolve from a leading builder of motorcycle sidecars to being a significant competitor in the bus and funeral car/ambulance businesses? The history of The Flxible Company provides an answer to this question. It is the story of two Loudonville inventors—Hugo Young and Charles F. Kettering (Fig. 1). It is also the story of the dream about the future of a small town held by Charles Kettering and how that dream eventually led to Flxible and General Motors’ treading on the narrow edge of the United States antitrust laws.

Likewise, the history of Flxible’s early years reflects the changes that were occurring in the automotive culture of the United States. The evolution of the company from a sidecar manufacturer to being a bus, ambulance, and funeral car builder was driven by the advent of low-cost automobile transportation.

This article will examine the history of Flxible’s first three decades, 1913-42. A chronological history of major developments in the 83-year history of Flxible from motorcycle sidecars to bankruptcy as a transit bus manufacturer follows this article.

Underlying the history of Flxible was a unique relationship in American industrial history. Charles Kettering served as an investor, director and officer of Flxible as well as mentor, disciplinarian, cheerleader, and confidant to the company’s founder, Hugo Young, in the first three decades of Flxible’s history. The interaction between those two men was instrumental in developing the nature and heart and soul of Flxible. The early years of Flxible, therefore, were heavily influenced by the interaction of these two men.

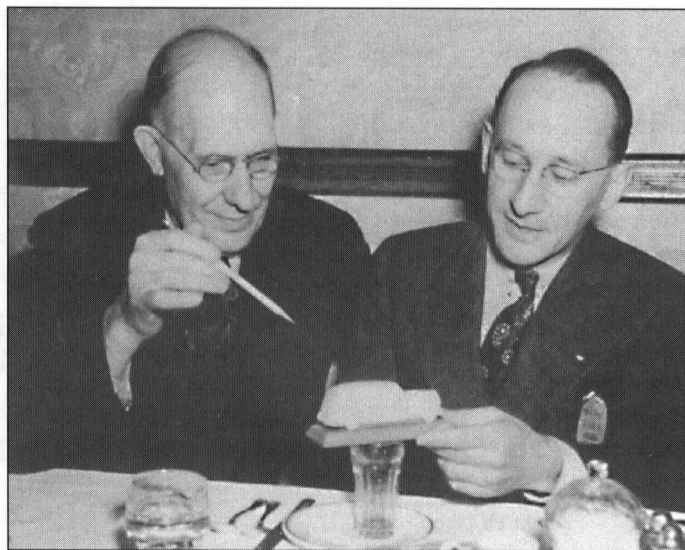


Fig. 1 - Charles F. Kettering and Hugo H. Young examine a paper-weight model of a Flxible funeral car at a dinner.

## The Sidecar Era

Hugo Young graduated from Loudonville High School in 1908 and worked for a time as a teller at the Farmers Bank of Loudonville. Then, given his talent for creative design, he opened an engraving and commercial lettering studio in Akron, Ohio. After a year in that business, Young opened a Harley-Davidson motorcycle agency in Mansfield, Ohio.<sup>1</sup>

In 1912, Hugo Young invented a flexible connection that attached a sidecar to a motorcycle. The invention of the flexible coupling led to two patents being granted to Young. The first, United States Patent number 1,204,924, granted November 14, 1916, was for a sidecar wheel that allowed the sidecar to tilt and stay on the ground when the motorcycle leaned going around curves.<sup>2</sup> Young’s second patent was for the sidecar itself and was granted July 31, 1917, as U.S. Patent number 1,235,177.

After conceiving of the idea for the flexible sidecar connection Young built a prototype sidecar for his own use. In 1913, Young and Carl F. Dudge, who later became a Vice President of Flxible, became partners in the founding of the Flxible Sidecar Company which was incorporated in 1914 for \$25,000.<sup>3</sup> The “e” was dropped from the name “Flexible” in 1913 in order that the name of the

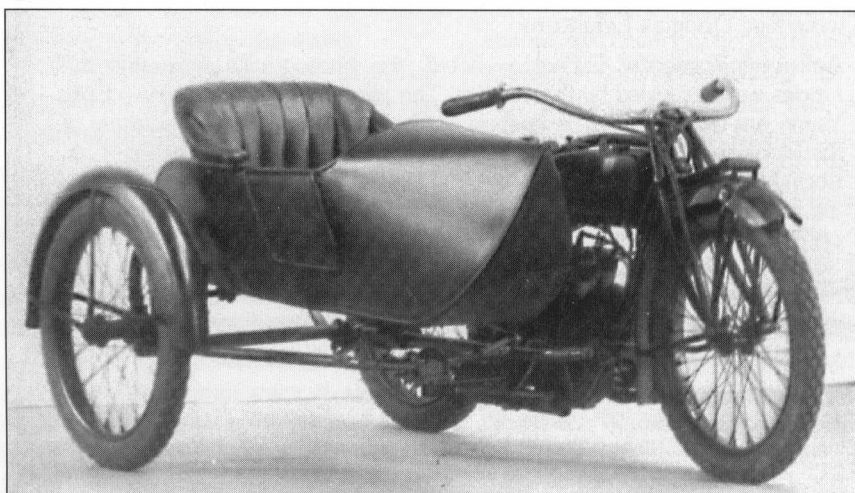


Fig. 2 - The Flxible sidecar

company would not be a common adjective, thereby enabling the name "Flxible" to be copyrighted and trademarked.<sup>4</sup>

Initially, the sidecars were assembled in Mansfield. In early 1914, Flxible rented a Loudonville factory.<sup>5</sup> At first, only the upholstery was made in Loudonville. Later, full assembly of the sidecars was transferred there.<sup>6</sup>

The Flxible sidecar was a commercial success due to the innovative nature of its design and the popularity of motorcycles during the early part of the 20th century (Fig. 2). Because it was an improvement over other sidecars, the Flxible sidecar became very popular among motorcyclists, especially those engaged in the sport of motorcycle sidecar racing. Important racing records were held by race drivers whose motorcycles were equipped with Flxible sidecars. Among the motorcycles using Flxible sidecars were Indian, Thor, Harley-Davidson, Henderson, Reading-Standard, and Excelsior.<sup>7</sup> The 1913-20 era, therefore, was one of rapid expansion for Flxible. That expansion was fostered both by the quality of the company's product and by the involvement of a Loudonville, Ohio, native by the name of Charles F. Kettering.

The early years of Flxible and the interests of Charles F. Kettering are inseparable. The life of Kettering is chronicled in detail in the writings of a number of authors including an official General Motors biography of him by T. A. Boyd (Professional Amateur, The Biography of Charles Franklin Kettering, New York: E.P. Dutton & Co., Inc., 1957), Stuart W. Leslie's Boss Kettering (New York: Columbia University Press, 1983), and a summary article by Mark Bernstein in the December 1990 *Ohio Magazine* entitled "Inventing The Wheel."

Kettering was born in 1876 on a farm near Loudonville. After he finished high school he attended the College of Wooster to study teacher training but left to teach in Mifflin, Ohio. In 1898 he went back to college, to the Ohio State University, to study electrical engineering. Unfortunately, eye problems caused him to leave OSU and he went to work as a pole digger for the Star Telephone Company of Ashland, Ohio. He soon became the company's chief engineer. In 1901, Kettering's eyesight improved enough to permit him to return to OSU from which he graduated in 1904. After graduation from OSU, Kettering went to work as an electrical inventor at the National Cash Register Company (NCR) in Dayton, Ohio. One of Kettering's major achievements at NCR was electrifying the cash register.

In 1908, Earl Howard, who had been secretary to NCR superintendent, Edward A. Deeds, but was then assistant sales manager of the Cadillac Motor Company, complained to Kettering that automobiles had unreliable ignition systems. Working in Deeds' barn on evenings and weekends, Kettering developed an ignition system that was more reliable and greatly extended the life of the battery.<sup>8</sup> Cadillac then ordered 8,000 of these ignition systems whereupon Kettering resigned from NCR and founded the Dayton Engineering Laboratories Company, which was shortened to the acronym "Delco." Through the use of subcontractors, Kettering ( Delco) was able to provide the ignition systems to Cadillac.<sup>9</sup>

Henry Leland, president of Cadillac, encouraged Kettering to work on development of a self-starter for automobiles to alleviate the inconvenient and sometimes dangerous method of starting a car by hand-cranking the engine.

Kettering and his staff at Delco developed a successful self-starter in early 1911.

Delco's success as an automotive supplier caused it to become a large concern. In 1916 it became a part of United Motors Company as William Crapo Durant extended the General Motors empire into the field of automobile accessories. Kettering and Edward Deeds, who had helped in the founding of Delco, sold out to GM for \$2.5 million in cash and 15,000 shares each of United Motors Stock. Kettering remained as president of Delco and Deeds remained as vice president.<sup>10</sup>

The sale of Delco to GM resulted in Kettering becoming GM's director of research, a position he held until his retirement in 1947. But, equally important for Flxible was that the sale of Delco to GM also made Kettering a wealthy man. Kettering used some of his money to invest in Flxible. He viewed his involvement in Flxible as an experiment to determine whether a successful manufacturing business could be established in a small town like Loudonville.<sup>11</sup> Years later, at the 1940 dedication of a new plant for Flxible, and as president of Flxible, Kettering reiterated his reasons for going into the Flxible venture. He stated the objective was to see whether or not "we could develop in Loudonville a self sustaining organization that could go and build and market a product. That's quite different from a branch factory."<sup>12</sup> Obviously pleased with the results at Flxible, Kettering philosophized that, if firms like Flxible were developed in 5,000 or 10,000 towns in the United States, there would be no unemployment.<sup>13</sup>

Hugo Young's Flxible Sidecar Company was technically interesting to Kettering at a time when the market for motorcycle sidecars was expanding rapidly. Furthermore, investing in Flxible gave Kettering the opportunity to build a manufacturing industry in his hometown of Loudonville. In the fall of 1915, Kettering offered to invest in Flxible.<sup>14</sup>

The details of Kettering's early investments in Flxible are evident in a letter from George B. Smith of Dayton, Ohio, financial advisor to Kettering, to Hugo Young on March 30, 1920. At that time, Flxible was reorganizing its capital structure and selling new stock. Kettering accepted stock in the company as payment for Flxible's indebtedness to him. The details of Flxible's indebtedness to Kettering are as follows:<sup>15</sup>

The stock given to Messrs. Smith and McCann was assigned at the request of Kettering in order to make them owners of the company to legitimize their positions on the Flxible board of directors. George B. McCann was part of the Delco organization.<sup>16</sup> George Smith was Kettering's financial manager.

The details of Kettering's financial involvement in Flxible indicate his initial investment was principally in the form of a loan of over \$160,000 plus some investment in stock. In return, Kettering received the presidency of the company, although Hugo Young continued to run the enterprise as vice-president and general manager.<sup>17</sup> Kettering never had any direct day-to-day operational responsibilities in Flxible.

The infusion of the Kettering funds enabled Flxible to begin an expansion program. The need for those funds was emphasized in a January 21, 1915, article in *The Loudonville Advocate* which stated the only thing preventing Loudonville from becoming the home of the largest sidecar industry in the world was a lack of sufficient capital. *The Advocate* quotes

Notes of the Company due Mr. Kettering	\$163,327.14
Account covering Loudonville Real Estate	10,531.00
Turned in old stocks of the Flxible Side Car Co.	5,000.00
Open book account of Flxible Side Car Co.	1,459.42
50% Stock Dividend on Flxible Side Car Co. stock	2,500.00
6% interest on notes (\$163,327.14) from March 23 244.99 to April 1, 1920.	

Total:	\$183,062.55
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The stock accepted by Kettering was broken down as follows:

800 shares of Common Stock of Flxible Co.	\$80,000.00 (Cert. #3)
500 shares of Preferred Stock of Flxible Co.	50,000.00 (Pfd Cert. #1)
250 shares of Preferred Stock of Flxible Co.	25,000.00 (Pfd Cert. #2)
250 shares of Preferred Stock of Flxible Co.	25,000.00 (Pfd Cert. #3)
26 shares of Preferred Stock of Flxible Co.	2,600.00 (Pfd Cert. #4)

	\$182,600.00
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One share in the name of Geo. B. McCann	100.00
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One share in the name of Geo. B. Smith	100.00
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Leaving open to be covered by check	262.55
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	\$183,062.55
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Certificates all dated April 1, 1920.

*Balance Sheet of the Flxible Company as of April 1, 1920.*

several testimonials to the quality of the Flxible sidecar and also makes reference to a Flxible van being in production, which was a device attached to motorcycles for use as a delivery van. Then, *The Advocate* described Flxible's future potential as follows.

“. . . it would certainly appear that Loudonville is slumbering with eyes fast shut, while just within her reach is an industry whose commercial and financial possibilities can only be compared to the development of a high-grade gold mine. THE INDUSTRY TO WHICH WE HAVE REFERENCE IS THAT OF THE FLXIBLE SIDECAR COMPANY SITUATED ON NORTH SPRING STREET. [Emphasis in original.]”<sup>18</sup>

Charles Kettering's investment in Flxible enabled at least partial fulfillment of the dream suggested by *The Advocate*. In 1916 Flxible built its own new factory in Loudonville which was opened the week of January 8, 1917.<sup>19</sup>

Shortly after the plant was opened, Flxible was called upon to build sidecars for the Allied forces in World War I. Through the Excelsior Company of Chicago, Illinois, Flxible received a contract to build rigid sidecars to fit the Excelsior motorcycles for use by the armed forces.<sup>20</sup> These sidecars were painted government regulation olive drab. In action, the sidecars were attached to Excelsior motorcycles and had a machine gun mounted on them. Virtually the entire production capabilities of Flxible were devoted to the manufacture of sidecars for Excelsior during World War I.<sup>21</sup>

By 1919, the prophecy of *The Loudonville Advocate* in 1915 became reality as Flxible was recognized as the world's

largest exclusive manufacturer of motorcycle sidecars. In July 1919 the directors changed the name of the company by dropping the words "Sidecar" to just The Flxible Company and increased the capital stock of the firm to \$500,000.<sup>22</sup>

By 1919, with a successful racing history, Flxible had regular shipments exceeding 300 sidecars per month, 60 people on the payroll and export markets opening in Australia, New Zealand, and Europe.<sup>23</sup> As a result, a need for plant expansion arose in 1919.<sup>24</sup> In this building program, Charles Kettering became financier and advisor. Although he never participated in day-to-day operations of Flxible, it is clear his involvement was not that of a silent partner.

For example, in May 1919, Kettering indicates in a letter to Hugo that he was directly involved with the building expansion program and was working directly with the architects.<sup>25</sup> Later in the building program, Kettering advised Hugo to not expand too much because of unsettled business conditions.<sup>26</sup> In the end, this was sound advice because the U.S. did have an economic downturn in the 1920-21 period and the motorcycle business began to weaken as low-priced automobiles usurped much of the market

for cheap personal transportation. Flxible spent most of the next five years trying to utilize the capacity it did have.

Although cautioning Young not to expand too quickly, Kettering clearly was behind the expansion effort. His loans to Flxible directly related to the plant expansion totaled \$31,932.33. Payments to contractors and subcontractors were made directly out of Kettering's account.<sup>27</sup>

The events of March 1920 give interesting insights into the way in which Kettering and Young interacted in these early days at Flxible. Even with over \$30,000 in Kettering money to finance the plant expansion and with contractors being paid directly out of Kettering's account, there still was a need for working capital at Flxible to finance operations.<sup>28</sup> As a result, it was decided to offer stock for sale to the Loudonville community. Hugo was certain that the effort to sell the stock would be successful only if Kettering was fully behind it. In fact, it appears that Hugo began to panic that Kettering might not show at the new plant's housewarming where it was hoped to obtain subscriptions for the stock offering. On March 18th, he wrote to George Smith that he expected Kettering to be at the housewarming and that the stock sale success depended on his presence.<sup>29</sup>

Kettering did show and the stock sale was a success. At the March 23, 1920, meeting of the stockholders for the new 20,000 square foot plant addition, over \$36,000 worth of stock was sold. In this recapitalization, debt to Kettering was converted to stock. As part of the deal, and in exchange for the stock, Mr. and Mrs. Kettering deeded the ground comprising the factory site over to the Flxible Company. The entry on the Kettering books indicates that the land was worth \$10,531.<sup>30</sup>

The fortunes of the operations of The Flxible Company during its first decade were directly associated with the fortunes

of the United States motorcycle industry. The timing of the founding of The Flxible Sidecar Company in 1913 by Hugo Young and Carl Dudte turned out to be excellent. The period of 1910 to 1915 is considered America's "Golden Age of Motorcycling." U.S. motorcycle production reached a peak of 71,000 units in 1913—a level not attained again until the second half of the 20th century.<sup>31</sup>

Following World War I, motorcycling became far less popular, in large part due to the competition from mass produced, low-priced automobiles. Harley-Davidson and Indian each had the capacity to make 35,000 motorcycles per year. In 1920, though, Harley made only 18,180 units and Indian built only 19,608. By 1922 Harley production dropped to 12,759 and Indian to 6,344. Between 1920 and 1924, Arnold Schwinn & Company which built Henderson and Excelsior motorcycles saw output decline from 4,678 to 1,956 units.<sup>32</sup>

Although sidecar racing was popular after 1920, accidents resulting in the death of sidecar occupants resulted in sidecar racing being banned after 1925.<sup>33</sup> That development, combined with a decline in the motorcycle market in general, did not help Flxible's situation.

The advent of multiple-passenger, cheap, mass-produced cars is cited by motorcycle industry analysts and Flxible corporate histories as a major contributor to the decline of the motorcycle industry after World War I. For example, an Excelsior motorcycle cost \$275 in this era.<sup>34</sup> If the motorcyclist wanted to carry a passenger in any degree of comfort, to that price had to be added the cost of a sidecar. Meanwhile, by 1923, Ford sold Model T runabouts for \$265.<sup>35</sup> Early in its history Flxible did not anticipate how serious the competition from low-cost automobiles would be. In 1915, Ford was building hundreds of thousands of Model Ts per year. Yet, in January 1915, *The Loudonville Democrat*, in an article on Flxible, states "authorities and investigators are of the opinion that the low-priced automobile will never take the place of the motorcycle for either business purposes or pleasure riding."<sup>36</sup>

While motorcycle production was declining, auto industry factory sales increased from a trickle of 4,192 cars in 1900, 24,250 in 1905, and 181,000 in 1910, to 895,930 in 1915, 1,905,560 in 1920 and 3,735,171 in 1925.<sup>37</sup> America was on wheels, but those wheels were under passenger cars, not motorcycles. Total registration in the U.S. of motorcycles fell from 175,000 in 1920 to 135,000 in 1929.<sup>38</sup>

From shipments of 342 sidecars in August 1920, production dropped to 43 in February 1921. The plant employed 30 people and was working only three days per week. Flxible's financial condition was somewhat precarious. The company owed \$27,500 but had only \$6,377 in cash and accounts receivable.<sup>39</sup> In July, Kettering lent the company \$4,000 to cover immediate expenses.<sup>40</sup> Kettering extended another loan of \$2,500 in December 1921 to meet pressing commitments of Flxible.<sup>41</sup>

Meanwhile, Hugo Young began to recognize that some way needed to be found to keep the Flxible plant operating because the declining motorcycle and sidecar industries would not achieve that end. But, in 1923 there was some increase in motorcycle demand in the U.S. For example, Harley-Davidson output increased from 12,759 in 1922 to 18,430 in 1923, Indian

output also was up from 6,344 in 1922 to 7,409 in 1923.<sup>42</sup> In February 1923, Young wrote George Smith that 50 were on the payroll, they had many orders and "everyone in the motorcycle industry is very enthusiastic."<sup>43</sup>

In March 1923, Flxible's sidecar orders continued to roll in. However, Flxible did consider some added products to make use of its production capabilities including making metal cabinets and the manufacture of lugs and nuts for automotive tire rims. To finance the labor and materials for the upsurge in sidecar production and the development of added products, Young asked Kettering for \$10,000 additional capital. The matter was resolved favorably in April 1923 when the Farmers Bank in Loudonville advanced Flxible \$20,000, apparently on Kettering's endorsement and agreed to advance another \$10,000 without personal endorsement.<sup>44</sup>

By the end of March 1923, Young's enthusiasm was declining for a rapid expansion of Flxible's product line. Things were going so well with sidecars that he believed "we should concentrate our efforts in taking care of it. Keeping in mind the other lines and as soon as we can locate the proper things to add them also."<sup>45</sup> Even though Flxible was enjoying some success in 1923, the company was still not profitable for the year.

However, by 1924, the temporary expansion in motorcycle demand was over. Major motorcycle manufacturers had declines in sales of as much as 20% to 30%.<sup>46</sup> Given the fluctuations in the motorcycle industry, it became clear that the sidecar business would not be sufficient to keep Flxible going. Therefore, 1924 was a year of transition for the company as it embarked on a path that took it into the motorbus and funeral/professional car business.

### ***Transition to Buses, Funeral Cars and Ambulances: 1924 to 1929***

During 1924 Flxible investigated a number of products to augment its product line. These included dishwashers and commercial bodies mounted on Ford chassis for retail delivery cars.<sup>47</sup> Nothing materialized from those ideas.

Kettering's views on the diversification issue and the important role he played in the affairs of Flxible are evident in a letter to Flxible stockholders which was presented at the 1924 annual meeting. In that letter Kettering observed that the problems in the sidecar business at Flxible were beyond the control of the company. He stated that the company's product was good. However, he noted that competition from the motor car industry reduced the level of the motorcycle business. Kettering urged that Flxible go slow in deciding on a new product to generate business to support its facilities. He wanted the company to get something that would fit into its existing production machinery. He noted that up to that time (July 1924), no such product had arisen that would be practical for the plant.<sup>48</sup> Clearly, then, the search was on in earnest for an alternative product at Flxible, but the decision would be neither careless nor whimsical. However, Flxible's loss estimated at about \$26,000 in 1923 and a loss of \$13,000 in 1924 gave urgency to the need to do something.<sup>49</sup> The path Flxible took was to enter the bus and funeral car/ambulance business.

In late 1924, The Flxible Company delivered its first bus, a 12-passenger sedan built on a Studebaker chassis, to E. L. Harter who operated a bus line from Ashland to Mt. Vernon,

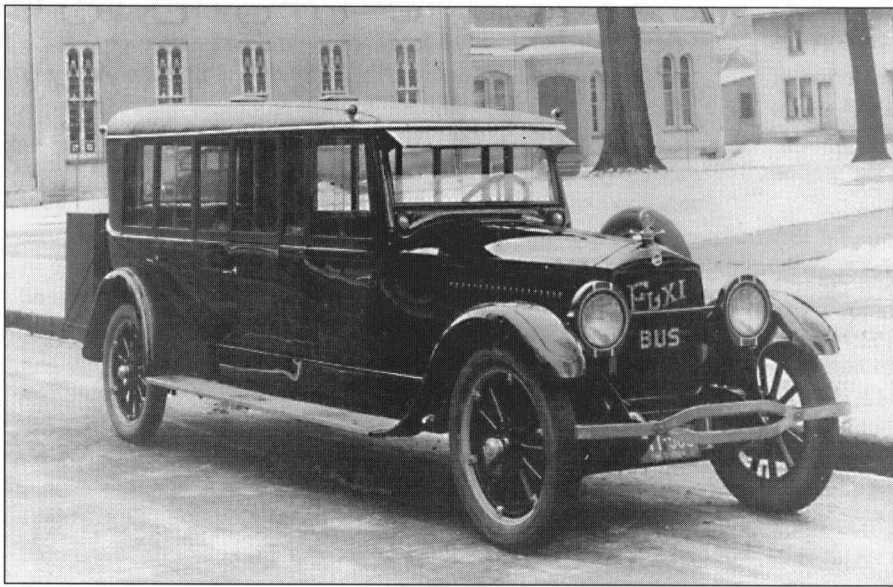


Fig. 3 - The first Flxible bus was this 12-passenger sedan built in 1924 on a Studebaker chassis.

Ohio.<sup>50</sup> (Fig. 3). The precise genesis of this first Flxible bus is uncertain. The Kettering Archives housed at the Kettering/General Motors Institute Alumni Foundation Collection of Industrial History in Flint, Michigan are a rich source of information on Flxible's first quarter century. However, for the latter part of 1924 there is very little correspondence in the archive and no detailed discussion of the development of that first bus appears to exist.

From information we do have, though, at least a partial picture of the circumstances surrounding the manufacture of the first bus can be pieced together. Clearly, the bus had to be conceived and built in the latter half of 1924. No mention is made of buses by either Kettering or Hugo Young in the first half of the year.

In later correspondence, Young reveals that it took Flxible seven weeks to build its first 12-passenger sedan (that is the first bus built on the Studebaker chassis).<sup>51</sup> Based on the time it would have taken to develop the idea for the bus and the seven weeks to build it, it is unlikely the bus was delivered to its purchaser before the fourth quarter of 1924. The only possible clue we have regarding the cost of the development of the first experimental Flxible buses is found in "The Flexible [sic] Company General Ledger 1924-1931." The first entry for buses in the ledger refers to experimental work on a Studebaker bus on November 29, 1924. It can be assumed this is a very early Flxible bus and, probably, the first built.<sup>52</sup>

Flxible corporate histories are silent on who conceived the idea for entering the bus business. The most likely and reasonable explanation is in the company's official 50th anniversary booklet. There, the advent of bus manufacture at Flxible is explained as a necessity because of the decline in the motorcycle market after the Model T Ford was priced below motorcycles. The only insight given regarding the bus business is: "The Flxible Company recapitalized, realigned its design and engineering functions, and began to manufacture motor coaches for the burgeoning mass transportation industry."<sup>53</sup>

A motivating factor in the bus decision was that Flxible

had the capability and facilities to make bus bodies. In assessing the situation at Flxible in 1925, Young determined that bus production could be entered into easier than any other products the firm had investigated over the previous three to four years. He noted that building bus bodies was well adapted to the company's existing equipment.<sup>54</sup>

The role of Charles Kettering in the bus decision is not clear. However, it is certain that Kettering had some interest in motor buses. Stuart Leslie, in his biography of Kettering, claims Kettering believed that expanding urban populations and the evolving highway system created a demand for a deluxe long-distance bus.<sup>55</sup>

An experimental bus was built for Kettering and he christened it the "Miss Ohio." It was a front-wheel-drive bus claimed by historian Stuart Leslie in his book on Kettering to have had a Cadillac engine.<sup>56</sup> However, according to a pamphlet on "Miss Ohio" published by

Yellow Truck & Coach, the bus had a 105 horsepower Yellow-Knight motor.<sup>57</sup> In the summer of 1925 Kettering, his 16-year-old son Eugene, and a number of associates took the bus on an 8,000 mile test run that demonstrated its reliability.<sup>58</sup>

About the time Kettering was testing the bus built for him by GM he was becoming involved with the Flxible bus project. Although the prototype Flxible bus on the Studebaker chassis was delivered in 1924, Flxible did not go into full production of buses until the second half of 1925. The early part of 1925 was spent building more buses and lining up financial support, primarily from Kettering.

On June 11, 1925, Kettering and a Captain Hallett from GM Research visited Flxible and a decision was made to go into the manufacture of bus bodies. During that visit, Kettering promised to lend Flxible money to implement the program. On June 22, 1925, Kettering instructed his financial manager, George B. Smith, to arrange a loan to Flxible for \$5,000. In a hand-written note on the June 22nd letter to Smith, he (Smith) noted that a check for half of the amount—\$2,500—was made out to The Flxible Company.<sup>59</sup>

By mid-August, Young was desperate for the other \$2,500. To fill existing orders for buses, Young needed working capital and was dismayed the other \$2,500 had not been released by Kettering's agent, George B. Smith. Adding to Flxible's financial woes were the need to fix the factory roof and an order from the city of Loudonville to install a concrete sidewalk on the east side of the plant. The result was a request for a \$7,000 loan from Kettering.<sup>60</sup>

Kettering was not amused by Flxible's request for more money. In response to Young, he wrote:

"The thing I do not like about this whole Flxible situation is that we do not get the estimates of what your requirements are going to be far enough in advance. I do not like to get a letter in which you say that we will have to get a certain amount of money



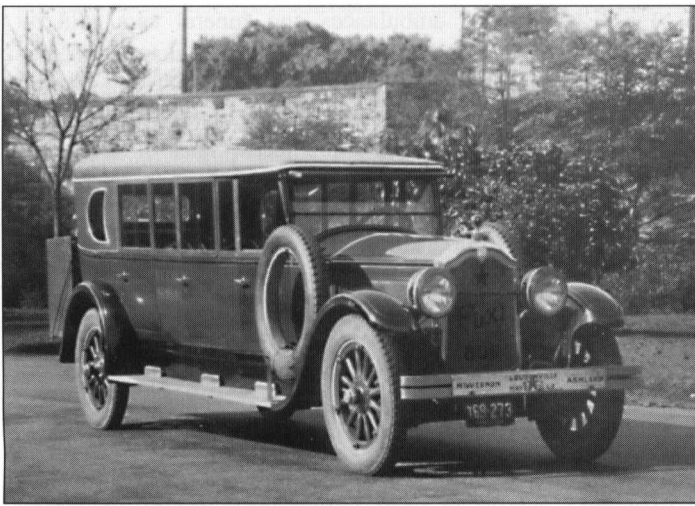


Fig. 4 - This bus is believed to be one of the first Flxible built on a Buick chassis in early 1925.

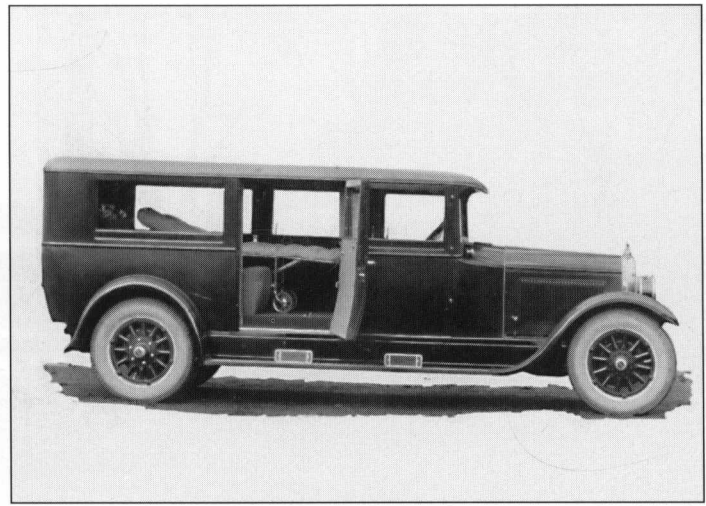


Fig. 5 - This 1925 Flxible ambulance was an early example of the company's entry into the professional car industry.

immediately. The thing that we should do is to lay out our budget and plan far enough ahead so that we will have some chance to organize our plans without being called upon to do something on a moment's notice. It is most important that we get our costs and our budget worked out by the first of the year. If we can do this, I am perfectly willing to loan the company some more money but I am not going into a venture where we will be throwing our money into a sink hole."<sup>61</sup>

In response to this somewhat critical letter from Kettering, Young composed a lengthy defense of the Flxible situation. He reminded Kettering that he (Kettering) estimated it would take between \$20,000 and \$25,000 to get started in the bus venture and at least six months before profits would be earned. Likewise, Young said he understood that Kettering had given the program his approval and Flxible had acted on that assumption by hiring experienced people.<sup>62</sup>

By late 1925, things were moving along pretty well for Flxible's bus-making endeavors. In a letter to George Smith in December 1925, Young was able to make good on his forecast of profits. The bus-making operations of Flxible began showing a profit in November 1925.<sup>63</sup>

Young was eager to get Kettering's assistance in obtaining chassis from Buick (Fig. 4). The exact cause of his concern is not clear. Young asked George Smith to have Kettering talk with a person at Buick referred to only as Mr. Bassett on the subject at his earliest convenience.<sup>64</sup> Smith replied that Kettering intended to talk with Bassett about the Buick situation.<sup>65</sup> Apparently the strategy to have Buick be supportive of Flxible's efforts worked because by late 1926, several Buick-owned branches (dealerships) were recommending Flxible bodies for buses, hearses and ambulance bodies.<sup>66</sup> (Fig. 5). Although production records show that in 1927-28 a few bus bodies were mounted on Cadillac, Reo, and Studebaker chassis,

almost all the Flxible buses built from 1925 through 1927 were on Buick chassis.

The declining motorcycle sidecar business that caused Flxible to enter the bus industry, as it sought alternative uses for its manufacturing facilities, also led the company to enter a closely related field for which it would be famous for decades. The building of ambulances and funeral cars became a logical complement to Flxible's bus building efforts. Flxible began manufacturing funeral cars in 1925.<sup>67</sup> As with the early buses, Buicks became the chassis of choice for Flxible ambulances and hearses.<sup>68</sup>

Bus, ambulance, and funeral car production brought prosperity to Flxible in the late 1920s. Following are the production totals for the first six years of vehicle production by Flxible<sup>69</sup>:

**PRODUCTION TOTALS FOR THE FIRST SIX YEARS OF VEHICLE PRODUCTION BY FLXIBLE**

	<b>Buses</b>	<b>Ambulances/ Funeral Cars</b>
1924	1	...
1925	31	11
1926	52	21
1927	119	40
1928	159	124
1929	112	264



Fig. 6 - A fleet of 1929, 17-passenger, probably models 17DL, Flxible buses lined up alongside the plant in Loudonville.

From sales of \$98,632 and a loss of \$26,486 in 1923 and sales of \$113,798 with a loss of \$13,138 in 1924, Flxible was profitable in 1926 with sales of \$176,026 and earnings of \$6,264. By the end of the decade, sales totaled \$528,796 in 1929 with profits of \$74,660. Bus sales accounted for about half of those dollar sales at \$254,429 (Fig. 6). The remainder of 1929 sales were accounted for by funeral and ambulance sales, automotive bodies and some residual motorcycle sidecar sales. However, the sidecar business was now a very small part of Flxible with sales of only \$8,177.10 or 1.5% of total sales in 1929.<sup>70</sup>

Business was so good after bus and professional car production got underway that Young wrote Kettering in 1927 that the Flxible facilities would have to be expanded.<sup>71</sup> Young's plans for an addition to the factory progressed through the remainder of 1927. In December 1927, C. F. Kettering, Inc., the business which managed Kettering's financial affairs and was run by George B. Smith, agreed to lend Flxible \$20,000 for the factory addition.<sup>72</sup> This addition was an extension to the south of the earlier 1919 addition. Construction of the addition progressed through the early part of 1928 and Flxible was able to move into it in April of that year.<sup>73</sup>

### ***The Maturing of Flxible: 1930-42***

The Depression of the 1930s presented Flxible with serious challenges. In 1933 the U.S. economy hit the low point of the Depression. The Real Gross National Product of the U.S. (the GNP adjusted for the effects of inflation or deflation, which is the best measure of total output of the country) declined 2% from 1932 and was down 30% from 1929.<sup>74</sup> The Depression hit the bus operations at Flxible rather hard. In fact, in these years, the ambulance and funeral car business sustained the company. Bus sales were 81 in 1930, 77 in 1931, 11 in 1932, 10 in 1933, and 6 in 1934. Ambulance and funeral car production was 213 in 1930, 182 in 1931, 171 in 1932, 222 in 1933, and 156 in 1934. Table 1 (see p. 19) gives a breakdown of Flxible's dollar sales in 1932 and 1933 by product category. In 1933, the value

of used ambulances and funeral cars sold by Flxible was almost equal to the value of new bus sales. Only 14.5% of Flxible sales were new buses whereas almost two-thirds of sales were new funeral cars and ambulances. Sales of new buses were down 73% but sales of ambulances and funeral cars declined only 31.5%. The loss of over \$174,000 suffered by Flxible was nearly devastating after the strong years of the late 1920s. As Table 1 shows, the loss for 1933 wiped out all the corporate surplus built up in those better years.

Flxible's problems were compounded in the early 1930s by repossessions of buses. In February 1933, Hugo Young observed that bus sales, which had been very profitable in the past, declined sharply in 1932. Furthermore, in correspondence with Kettering, Young indicated management made the decision to limit bus production.

“. . . our experience in repossessions and slow collections has prompted us to decide that we will not put forth much effort in the bus line this year [1933], except, to dispose of repossessions and only build new buses on orders where cash will be paid on delivery or the credit is known to be unquestionable.”<sup>75</sup>

The losses on bus repossessions which, according to informal company documents numbered 19 or 20 in 1930 through 1932, contrasted with the experience on ambulances and funeral cars. Only three repossessions occurred on over 500 professional cars sold in a six-year period. On the resale of the repossessed professional cars a small profit was made.<sup>76</sup>

One can only imagine that early 1933 was a time of stress for Hugo Young and his management team at Flxible. In addition to the weak business conditions, the company's auditors, Haskins & Sells, Certified Public Accountants, through their representative, H. G. Cook, issued a scathing report on the affairs of Flxible in March 1933. Following is a summary of the major points in the Haskins & Sells report as presented by George B. Smith, Charles Kettering's financial advisor:

The above observations on Flxible operations reveal a firm that had not quite adapted to the conditions at the depths of the Depression in March 1933. Perhaps because of the small-town, almost family nature of the enterprise, Hugo Young did not exercise the amount of fiscal management discipline required to see a company through difficult times. In reply to George B. Smith regarding the Haskin & Sells report, Young addressed the financial issues but none of the management concerns. He indicated Flxible was doing all it could to reduce inventories but was having great difficulty doing so. He thought it would be possible to get approval of the stockholders to place a mortgage on the property to raise cash. However, the Loudonville bank was not lending at the time and efforts were underway to try to obtain a loan from the Reconstruction Finance Corporation or the Mansfield Savings Bank.<sup>78</sup>

Although the corporate records are not available to indicate the amount and type of lending Flxible was able to

### HASKINS & SELLS REPORT ON FLXIBLE: 1933

1. Something must be done soon to supply further financial help to The Flxible Company;
2. Repossessions of buses and professional cars was a problem;
3. The old sidecar inventory being carried at \$9597.00 should be scrapped and written down to scrap value;
4. It is advisable that the sales manager, Mr. Bennett, leave the company because of his lack of cooperation with management in matters of billing causing delays in collections. Mr. Cook advised that Glenn Crow be made head of the Sales Department;
5. The inventory at Flxible, at \$189,900, was about 40% higher than it should be and should have been materially reduced before then;
6. The overhead was too large and the salaries of the office personnel should be cut further;
7. To raise capital, a loan should be sought that would be secured by a mortgage on the real estate. Stockholder approval would be necessary for such a loan and Mr. Cook believed that could be obtained easily;
8. Cook's final comments were observations on personnel. He considered Hugo Young a hard worker, capable, conscientious but at times too easy with members of his organization.<sup>77</sup>

obtain, the company did work its way through the financial turmoil of 1933. And during that period, the firm was able to introduce a major new product that set a design pattern for Flxible products over the decades.

In 1932, Flxible determined a demand existed for lighter equipment that could be more economically operated than its existing line of Buick-based buses. In response, it introduced the Flxible Airway Coach built on a Chevrolet truck chassis with the body having a wooden frame. Flxible claimed that the Airway Coach provided the economical operation and low maintenance cost desired by bus operators during the Depression. The company stated "many of the bus operators of the country have told us that they could not have weathered those trying times had it not been for the economies they were able to effect by the use of Flxible Airway Coaches."<sup>79</sup>

The distinguishing styling feature of the 16-passenger Airway Coach was its sloping, rounded back rather than the square-back design of prior bus models. The rounded, sloping



Fig. 8 - The 1936 Flxible-Buicks featured on an all steel "Turret Top" along with modernistic flowing lines.



Fig. 7 - the Flxible Airway Coach went into regular production in 1934 and was the company's response to the depression-induced demand for a lower-priced, reliable bus.

back design evolved further in the future at Flxible and became a virtual trademark for the company's small intercity buses for 30 years. (Fig. 7).<sup>80</sup>

Flxible company publications from World War II and Larry Plachno's work on Modern Intercity Coaches state the Airway Coach was introduced in 1932.<sup>81</sup> It is possible that a prototype Airway was produced in 1932 or 1933 and production not started up until 1934. Company production records show the Airway coaches went into production in 1934 with six buses built that year. As noted earlier, in 1933 Flxible suffered a precipitous decline in bus sales and decided to build buses only on confirmed orders with cash-in-hand. Therefore, it would be reasonable to conclude that, given the business environment, Flxible chose not to bring the Airway Coaches into production until 1934.

The Airway Coach was a financial as well as design success for Flxible. By 1935, Flxible was back to operating at a profit. For the fiscal year ended June 30, 1935, sales were \$565,852 and profits were \$10,342.<sup>82</sup> In the mid-1930s, Flxible did not break down its sales by lines of business. But, it is clear that a good share of the sales increase came from sales of Airway Coaches. From 1933 to 1935, sales were up almost 67% while the unit sales of funeral cars and ambulances were actually down 21.6%. In 1936, Flxible sales were \$872,786 and profits were \$24,885. That represented an increase of sales of 54% over 1935 while ambulance and funeral car sales increased only 18%.<sup>83</sup> Company production records indicate Airway Coach output increased from 83 in 1935 to 126 in 1936. (Funeral car and ambulance sales were 174 in 1935 and 206 in 1936).<sup>84</sup> (Fig. 8).

In 1938, the market for intercity buses was somewhat unstable. Recovery from the Depression was not complete and 1938 ended up being a recession year with a 5% decline occurring in Real Gross National Product. Into this tenuous and unstable market, in 1937, Flxible introduced a new bus model, the Clipper, with its dynamic styling. It became the bus for which Flxible was best known. The Clipper also was a bus that was very good to Flxible as a company. The first Clipper was a departure from Flxible's previous styles which had a



Fig. 9 - This 1937 Clipper represents the first year of Clipper production. The 1937s were also the first Flxible buses of the cab-over-engine design and the last to use wooden framework.

conventional automobile type hood. The original Clipper was built on a Chevrolet chassis and had the engine up front. The design, however, was of a cab-over-engine type with the engine fully enclosed inside the body of the bus.<sup>85</sup> The 1937 Clipper featured streamlined styling with a rounded back. It carried 25 passengers, compared to the 17 for the Airway Coach, and was the last Flxible bus to have a wooden framed body mounted on a chassis. (Fig. 9).<sup>86</sup>

The market rewarded Flxible for its innovative new Clipper design. Flxible bus production in 1937 increased to 163 from 126 in 1936.<sup>87</sup> Production of ambulances and funeral cars increased from 206 in 1936 to 306 in 1937.<sup>88</sup> In 1937, Flxible became a million dollar company for the first time. Sales were \$1,116,015 in 1937 compared to \$872,786 in 1936. The 1937 bottom line also was strong with net income of \$48,942, nearly double the earnings of \$24,885 in 1936. Further good news for Flxible was that once again the capital account showed a surplus with the profits in 1938 finally wiping out the accumulated deficits of the Depression years.<sup>89</sup> These successes enabled Flxible, with a payment of \$39,200, to pay back all money borrowed from C.F. Kettering, Inc., the financial entity organized to administer Kettering's wealth. George B. Smith, Kettering's financial advisor and administrator of C.F. Kettering, Inc., congratulated Hugo Young on the financial achievements at Flxible and offered that "if at some future date you want to reopen part of this [line of credit], it will be agreeable to us."<sup>90</sup>

As innovative and attractive as the 1937 Clipper was, it was only a transitional model. Evidence suggests that as early as 1936, Flxible was working on an integrated bus design. In correspondence with Flxible's bankers in 1938, Hugo Young wrote that for two years Flxible allowed some customers who liked to be first with a new product to test a new rear-engine, all-steel design.<sup>91</sup>

The 1937 wooden-framed Clipper might have been a market test to gauge the reaction of bus operators to a dramatically different bus design concept. Flxible may have been cautious about how far to go in bringing out an integrated bus design that also broke new ground in streamlined styling.

The success of the Clipper in 1937 and the reaction of companies who were testing the new design apparently were encouraging to Flxible. As a result, Flxible brought a new model of the Clipper to market in 1938.

The 1938 Clipper was the first all-steel-frame bus built by Flxible.<sup>92</sup> The new Clippers were of an integrated bus design. That is, rather than having the body built separately and attached to a chassis, the entire bus body and frame were built as an integrated unit. Another feature of the 25-passenger Clipper was that it had a six-cylinder Chevrolet engine mounted longitudinally in the rear. It was the first rear-mounted engine Flxible bus.

In 1938, Flxible built 148 buses and 373 professional cars. Bus sales were in a boom with the success of the Clipper and rose to 282 in 1939 which more than offset the decline in professional car output to 275. It was a good year for Flxible and Charles Kettering took the opportunity to congratulate Hugo Young on the successes achieved at Flxible. The entire text of the letter is presented below for several reasons. First, it indicates substantial progress had been achieved at Flxible. Second, it gives insight into Kettering's thinking about the role of Flxible in the Loudonville community. Finally, it is a rare example of Kettering being highly complimentary of the Flxible operation.

The Clipper was so successful for Flxible that plant expansion once again became necessary. Construction was started on the \$125,000 plant addition in 1939 and completed in January 1940.<sup>94</sup> Flxible more than doubled its manufacturing

July 7, 1939

Mr. Hugo Young  
The Flxible Co.  
Loudonville, Ohio.

My dear Hugo:

The reports of the progress that you have been making in the Flxible Company during the past few years deserves hearty commendation. We all realize that these results have been done by hard work, careful management and fine cooperation of all the departments.

A job is never finished because competition will always pick up whatever gains you make and apply them against you. So that we have to always be thinking several years in advance because it was this type of thinking, that, in none too good times made it possible for you to put the Flxible in the condition it is today.

I believe you have established in Loudonville a very definite procedure by which small towns can run successful businesses. An accomplishment of this kind cannot be done quickly and the cooperation of the stockholders has been very greatly appreciated in carrying on this work.

Loudonville is a fine place for our type of industry. Many of the people are stockholders and as partners are vitally interested in the success of the Company. Through the lean years they have gone along with us, always hoping for better days and I believe that we can say that these better days are definitely in sight.

Again, congratulating you and your associates, I remain,

Sincerely,

C. F. Kettering<sup>93</sup>

space with construction of the new facility. The company claimed it was the first single unit, straight-line assembly production building for the manufacture of funeral cars, ambulances and buses.<sup>95</sup>

Charles Kettering returned to Loudonville for the dedication of the Flxible plant addition. Kettering did double-duty that day. He gave a dedication speech at two events—at the Flxible plant opening and at the dedication of an addition to the Loudonville high school. The dual dedications were a major event for Loudonville and over 2,000 residents turned out for the ceremonies.<sup>96</sup> Flxible, by 1940, was the major employer in Loudonville and a well-established local institution. The fact that 2,000 residents, close to the entire population of less than 2,500, turned out indicates the level of interest and pride people had in Flxible.

At the factory dedication, Kettering delivered what could be described as a motivational speech lauding the accomplishments of Loudonville's small town spirit. He was particularly laudatory to Hugo Young and included the following statement: "In doing this Flxible work, Mr. Young and his associates have done a perfectly normal high-grade job."<sup>97</sup>

Flxible introduced refined models of the Clipper in 1940. By now, Clippers were available with either Chevrolet six-cylinder or Buick FB 320 straight-eight engines. Flxible sold 148 buses in 1938, 282 in 1939, 240 in 1940, 436 in 1941, and 485 in 1942. Funeral car and ambulance production went from 373 in 1938, 275 in 1939, 542 in 1940, and 503 in 1941, the last year of production before full conversion to the war effort. Richard Mayer, who worked at Flxible from 1937 to 1975 and retired as secretary and treasurer of the Company, recalls the early 1940s as an exciting and busy time. Even the plant expansion in 1940 did not alleviate the pressures on the company's capacity. Mayer recalls that Flxible was building buses on the street. Semi-finished buses were driven out onto the street and electric cords run out to them so that electric drills could be used to finish the buses.<sup>98</sup>

The 1930 to 1942 period was one of singular importance to Flxible. Its conversion to an intercity bus and funeral car and ambulance manufacturer was complete by the end of the 1930s. Through surviving the problems of the



*Fig. 10 - St. Andrews School in Boca Raton, Florida purchased this 1942 Clipper just before World War II brought bus production to a halt.*

Depression, Flxible demonstrated it was a mature business organization. And, in its bus business it introduced and established as a successful product the innovative Clipper. As World War II dawned Flxible was in the strongest position in its 30- year history (Fig. 10).

During its early years, it is obvious that Charles F. Kettering had a close relationship with Flxible. He was its financier, its president, a member of the board and its advisor for most of the first half of the company's history. No where is this more evident than in the close ties Kettering maintained and financial assistance he provided to Flxible as it made the transition from motorcycle sidecars to buses and funeral cars in the 1920s. However, during this same period of time, Kettering served as a vice president, employee, and director of GM.

The interesting question, then, is whether Flxible and GM were in conflict with United States antitrust laws by having Kettering a director of both firms. Related to this question is why it took the United States Department of Justice Antitrust Division until 1956, which was 31 years after Flxible entered the bus business, to file a complaint regarding the relationship of Kettering to GM and Flxible as a director and officer of both firms.

Although GM technically had been involved in building buses for some years through sale of chassis to local operators who had bodies installed, it was in 1925 that GM made its most significant move to enter the bus building industry. That year, of course, was the same year Flxible began regular production of buses.

General Motors' entry into the bus industry was facilitated by its purchase of controlling interest in the Yellow Cab Manufacturing Company of Chicago in the summer of 1925. Yellow was a manufacturer of taxicabs and buses. Under the complex agreement, in August 1925, the truck division of General Motors was incorporated as General Motors Truck Corporation. The name of Yellow was changed to Yellow Truck & Coach Manufacturing Company. Yellow Truck and Coach bought General Motors Truck Corporation on September 1, 1925 for \$16 million and GM used the proceeds to buy all the common shares of Yellow Truck & Coach which was about 57% of the total capital investment in the company.<sup>99</sup>

Building on the foundation of the Yellow Coach Division, GM became the market leader in both the intercity and transit bus industries where Flxible also was a competitor.<sup>100</sup>

Through most of this period of time Kettering was president and a member of the board at Flxible. Furthermore, he was appointed a director of General Motors on December 30, 1920 and was a vice-president of GM from January 13, 1921 until his retirement.<sup>101</sup>

The legal issue involved is one of interlocking directorates. In 1890, the Sherman Antitrust Act, the cornerstone of U.S. Antitrust policy, was passed. Section 1 of the Sherman act declared any contract, combination, or conspiracy in restraint of trade illegal. Persons found engaging in such activity were guilty of a misdemeanor. Section 2 stated anyone monopolizing or attempting to monopolize any part of the trade or commerce of

the several states was guilty of a misdemeanor. Jail sentences and fines for violation of Sections 1 or 2 were the possible punishment. However, the strongest deterrent to monopolizing activity was found in Section 7 of the Sherman Act. Individuals or firms injured by actions declared illegal in the Sherman Act could sue. On proof of a violation of the law and financial injury the aggrieved party could recover three times the damages suffered.<sup>102</sup>

One of the weaknesses of the Sherman Act was that it did not spell out specific actions that might put a firm or individuals in violation of the Act. There was a need for preventative legislation to supplement the remedial provisions of the Sherman Act. The Clayton Antitrust Act, passed in 1914, provided guidance on actions to prevent monopolizing activity. There were several major provisions of the Clayton Act including a prohibition of mergers of firms in the same industry (known as horizontal mergers) if the effect was to lessen competition.<sup>103</sup>

However, the provision most interesting for our discussion here is Section 8 of the Clayton Act which prohibits interlocking directorates. Section 8 states the same person is not permitted to sit on the board of directors of competing corporations.<sup>104</sup> That, of course, is precisely what Charles F. Kettering was doing from the 1920s to the 1950s as a director of both Flxible and GM and even president of Flxible.

Given the obvious position of Kettering, why didn't the U.S. government attempt to prosecute Kettering, Flxible, and GM before 1956? The answer is related primarily to administrative matters.

Section 8 of the Clayton Act applied to corporations "any one of which has capital, surplus, and undivided profits [meaning net worth] aggregating more than \$1,000,000."<sup>105</sup> Flxible did not meet the \$1,000,000 threshold in the pre-World War II era. For example, in 1930 the Flxible net worth was only \$60,334.03.<sup>106</sup> GM, though, in 1930 had a net worth exceeding \$679 million.<sup>107</sup> Therefore, there would appear to have been a violation of the Clayton Act's Section 8 in the Kettering situation. One factor contributing to the governmental inaction may have been that the Antitrust Division of the Department of Justice and the Federal Trade Commission had not devoted a significant portion of their resources to detecting and attacking violations of Section 8. The reason for this lack of attention might be that the law prohibits only direct interlocks where one person sits on the board of two or more competing firms. But, it does not prohibit indirect interlocks where a firm such as a bank or law firm has representatives (not necessarily the same person) on the boards of two or more firms that are competitors. That is, the directors or executives of competing firms may serve together on the boards of other firms. For example, the presidents of two or more steel making firms might be directors of the same bank.<sup>108</sup>

Finally, Section 8 does not appear to be a serious issue in the overall economy. Complaints often lead to the resignation of the offending director once notification of the violation is received.<sup>109</sup> It appears that the government anti-trust enforcers had not been impressed with any serious threat to competition existing from interlocking directorates. Therefore, GM, Flxible, and Kettering escaped scrutiny for over 30 years.

The picture changed, though, on July 6, 1956 when the Antitrust Division filed a complaint against GM alleging wide-

spread violations of the antitrust laws in the bus industry. Specifically, the complaint alleged the following:

#### U.S. Antitrust Complaint Against General Motors

\* \* \* \* \*

"Par. 20: The Flxible Company has been engaged in the manufacture of buses for more than twenty-five years. Flxible now manufactures and sells both transit and intercity buses. For many years Charles F. Kettering has been the chairman of the Board of Directors of Flxible and holder of more Flxible stock than any other stockholders of Flxible. During much of the same period of time he also was an officer and director of General Motors.

\* \* \* \* \*

Par. 23 (b) the defendant [G.M.] acquired the power to influence the policies of its principal existing competitor in the manufacture of intercity buses by having an officer and director of General Motors as Chairman of the Board of Directors and principal stockholder of that company,"<sup>110</sup>

GM did not engage in a vigorous defense of the allegations that a violation of the prohibition of interlocking directorate occurred. In its answer, GM stated:

"Par. 17 that it is without knowledge or information sufficient to form a belief as to the truth of each and every averment of paragraph 20 except that the Flxible Company now manufactures and sells both transit and intercity buses, that Mr. Charles F. Kettering has been an officer and director of defendant and has been Chairman of the Board of Directors of the Flxible Company."<sup>111</sup>

The view of Flxible was that the interlocking directorate involving Kettering, Flxible, and GM was not a serious issue. In a 1965 interview, Thomas P. Butler, the president of Flxible, stated that Kettering played a very minor role in Flxible operations and that in his 50 years as a member of the board he only attended three or four meetings. Butler stated there was no evidence of collusion with regard to Kettering whose interest in Flxible was merely a personal one.<sup>112</sup>

The government's antitrust case against GM relative to the bus industry dragged on with various legal maneuvers for nine years. On November 30, 1965, a consent agreement was filed in Federal District Court in Detroit. The nature of a consent agreement is that a firm agrees to do (or not to do) certain things but admits no guilt in a particular case and no trial is undertaken. The consent agreement was filed as a final judgment "without adjudication of any issue without this Final Judgment constituting evidence or any admission by either party hereto with respect to any such issue."<sup>113</sup>

With reference to the interlocking directorate issue, the agreement enjoined GM from "having or allowing to serve as an officer or director or as a staff head or bus sales executive or bus sales representative of the GMC Truck & Coach Division any individual whom it knows to be an officer or director of any manufacturer of buses."<sup>114</sup> By 1965, though, the whole issue of an interlocking directorate between Flxible and GM was a moot point because it involved only one person—Charles F. Kettering who had died in 1958.

## Concluding Comment

In the end, therefore, we are left with the realization that a legally questionable arrangement existed with Kettering on the board of directors of both Flxible and GM. Also, Kettering was an advocate for and involved in the bus manufacturing activities of both firms. However, there is no apparent indication that overt collusion ever occurred between the two firms even though Kettering was on the board of directors of both companies. Yet, due to the consent agreement, the issue never was tested fully in court. Kettering's involvement in and relationship to Flxible, therefore, must be considered one of the most unique management and ownership relationships to have existed in the motor vehicle industry.

Through Kettering's involvement in Flxible that firm was provided financial resources that might otherwise not have been forthcoming. The Kettering investments in Flxible helped it make the transition from a motorcycle sidecar builder to a significant competitor in the bus and professional car markets. It is doubtful Flxible could have made the transition on its own. The emerging automotive culture of the U.S. had made the motorcycle a marginal transportation item in an era of cheap automotive transportation. Through the vision of Hugo Young and the direction and financing of "Boss Kett," Flxible came to the eve of the World War II as a successful and innovative firm.

I am grateful to the late Professor Richard Sarchburg for granting me access to and use of the Kettering papers housed at the Kettering/General Motors Institute Alumni Foundation Collection of Industrial History in Flint, Michigan. Also, I am indebted to Thomas Jones, Librarian of the Motor Bus Society and James Sharp, Director of the Cleo Red Fisher Museum of The Mohican Historical Society in Loudonville, Ohio for access to those collections. My student assistant, Julianne Robbins, did heroic work in assisting with the research and manuscript preparation. However, any errors in the article are solely my responsibility.

## Notes:

\* The Reconstruction Finance Corporation was created in 1932 by an Act of Congress to encourage and aid financial institutions to lend money to revive business and industry. The RFC was capitalized initially at \$500,000,000 and was authorized to sell a total of \$1.5 billion in notes or bonds to the U.S. Treasury.

Pictures in this article are "factory" photographs. This is a term commonly applied to official illustrations taken by company photographers for distribution or internal use by the manufacturer. Some of these are for official files or reference within the company. Many times they are for use in advertisements, sales albums, or brochures.

The Flxible factory photograph archive was transferred to Thomas A. McPherson of Willowdale, Ontario and author of Flxible Professional Vehicles: The Complete Story (Don Mills, Ontario, Canada: Specialty Vehicle Press, 1993). The photographic archive was transferred to Mr. McPherson, along with all copyrights, in 1974 to prevent their destruction. Use of these photographs in this article is with the permission of Thomas A. McPherson. Access to the photos was obtained

through the collections of The Motor Bus Society Library in Hopewell Township, New Jersey (Thomas Jones, Librarian) and the Mohican Historical Society in Loudonville, Ohio (James Sharp, Director) and several individuals who are acknowledged in the text.

<sup>1</sup>"The Flxible Company: Meeting Tomorrow Today." Loudonville, Ohio: The Flxible Company, 1963, p. 1.

<sup>2</sup>Historical Synopsis: The Flxible Corporation published by General Automotive Corporation, Delaware, Ohio, 1993.

<sup>3</sup>"The Flxible Side Car," *Flxible Clipper-ings*, Loudonville, Ohio. The Flxible Company, circa 1944, vol. 2, no. 1, p. 3

<sup>4</sup>"What happened to the 'e' in Flxible?," *Flxible News*, vol. 7, no. 6, March 19, 1952, p. 2.

<sup>5</sup>"Flxible Side Car Co.," *Loudonville Democrat*, April 16, 1914.

<sup>6</sup>"The Side Car Factory," *Loudonville Democrat*, June 18, 1914.

<sup>7</sup>*Flxible Clipper-ings*, p. 3.

<sup>8</sup>Boyd, T.A. Professional Amateur, The Biography of Charles Franklin Kettering. New York: E.P. Dutton & Co., Inc., 1957, pp. 61-67.

<sup>9</sup>Leslie, Stuart W. Boss Kettering. New York: Columbia University Press, 1983, pp. 41-44.

<sup>10</sup>Leslie, pp. 44-57.

<sup>11</sup>Boyd, p. 87.

<sup>12</sup>Kettering, Charles F., text of speech by, at the dedication of the new Flxible building at Loudonville, Ohio, Friday, January 12, 1940.

<sup>13</sup>Kettering speech, January 12, 1940.

<sup>14</sup>Leslie, p. 61, citing George Smith, "History of Activities of Charles F. Kettering, 1916-1939," p. 13. Leslie referenced the Kettering Archives for this source.

<sup>15</sup>Smith, George B., letter to Hugo H. Young and attachment "Entry on C.F. Kettering Books," March 30, 1920, Dayton, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no.87-11.2-163B.

<sup>16</sup>Smith, G.B. to George B. McCann, May 5, 1920, Dayton, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no.87-11.2-163B.

<sup>17</sup>Leslie, p. 61.

<sup>18</sup>"Loudonville's Opportunity," *Loudonville Advocate*, January 21, 1915, p. 1.

<sup>19</sup>Historical Synopsis, p. 2.

<sup>20</sup>"Flxible History Marked By Honors in 2 Wars," *The Loudonville Times*, August 25, 1944, p. 1.

<sup>21</sup>*Flxible Clipper-ings*, vol. 2, no. 1, p. 3.

<sup>22</sup>Historical Synopsis, p. 2

<sup>23</sup>See for example, Young, Hugo H. to Charles F. Kettering, February 1, 1919, February 25, 1919, May 3, 1919, and June 17, 1919, Loudonville, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 87-11.2-163.

<sup>24</sup>Young, Hugo H. to Charles F. Kettering, February 25, 1919, Loudonville, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 87-11.2-163.

<sup>25</sup>Kettering, C. F. to Hugo H. Young, May 17, 1919, Dayton, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 87-11.2-163.

<sup>26</sup>Kettering, C. F. to Hugo H. Young, November 10, 1919, Dayton, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 87-11.2-163A.

<sup>27</sup>Yuncker, M. L. to George B. Smith, January 26, 1920, Loudonville, Ohio, and George B. Smith to The Flxible Sidecar Company, Dayton, Ohio, January 8, 1920. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 87-11.2-163B.

<sup>28</sup>Young, Hugo H. to George B. Smith, December 6, 1919, Loudonville, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 87-11.2-163A.

<sup>29</sup>Young, H. H. to George B. Smith, March 1920, Loudonville, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 87-11.2-163B.

<sup>30</sup>See Hugo H. Young to Charles F. Kettering, March 27, 1920, notice of a special meeting of the stockholders of The Flxible Company, dated March 16, 1920 and George B. Smith to Hugo Young, March 30, 1920. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 87-11.2-163B.

<sup>31</sup>Sucher, Harry V. Inside American Motorcycling and the American Motorcycle Association, 1900-1990, pp. 20-31.

<sup>32</sup>Sucher, pp. 50 - 67 and 385.

<sup>33</sup>Sucher, pp. 69.

<sup>34</sup>See, for example, Sucher, pp. 57 and 63 and Historical Synopsis.

<sup>35</sup>Automobile Manufacturers Association, Inc., Automobiles of America, third edition, revised. Detroit: Wayne State University Press, 1970, pp. 77-78.

<sup>36</sup>"The Flxible Side Car," *The Loudonville Democrat*, January 21, 1915, p.1.

<sup>37</sup>Motor Vehicle Facts & Figures, 1998. Detroit: America Automobile Manufacturers Association, 1998, p. 3.

<sup>38</sup>Sucher, p. 116.

<sup>39</sup>Smith, G. B. to C. F. Kettering, April 1, 1921, Dayton, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 97-11.2-163D.

<sup>40</sup>Smith, G. B. to Hugo H. Young, July 29, 1921, Dayton, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 97-11.2-163D.

<sup>41</sup>Smith, G. B. to Hugo H. Young, December 23, 1921, Dayton, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 97-11.2-163D.

<sup>42</sup>Sucher, p. 385.

<sup>43</sup>Young, Hugo H. to George B. Smith, February 2, 1923, Loudonville, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 97-11.2-163E.

<sup>44</sup>See: G. B. Smith. to Hugo H. Young, March 24, 1923, Dayton, Ohio; Hugo H. Young to George B. Smith, March 28, 1923, Loudonville, Ohio and Hugo H. Young to George B. Smith, May 1, 1923, Loudonville, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 97-11.2-163E.

<sup>45</sup>Young, Hugo H. to George B. Smith, March 28, 1923.

<sup>46</sup>Sucher, p. 385

<sup>47</sup>Young, Hugo H. to C. F. Kettering, June 12, 1924 from the Hotel Las Salle, Chicago, Illinois; Young, Hugo H. to C. F. Kettering, April 14, 1924, Dayton, Ohio; Young, Hugo H. to C. F. Kettering, April 14, 1924, Loudonville, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 87-11.2-163F.

<sup>48</sup>Kettering "To The Stockholders of the Flxible Company," July 15, 1924.

<sup>49</sup>Losses for 1923 and 1924 estimated from available 11 month "Statement of Income and Profit and Loss, From July 1st, '23 to June 1st, '24," attached to letter from Hugo H. Young, to George B. Smith, June 17, 1924, Loudonville, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 87-11.2-163F.

<sup>50</sup>Historical Synopsis, op. cit.

<sup>51</sup>Young, Hugo H. to George B. Smith, May 21, 1925, Loudonville, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 87-11.2-163F.

<sup>52</sup>"The Flexible [sic] Company General Ledger 1930 - 1931," Account entries 831, 832, 833, 834. Mohican Historical Society, Cleo Redd Fisher Museum, Loudonville, Ohio.

<sup>53</sup>The Flxible Company, Meeting Tomorrow Today, 50th Anniversary publication of The Flxible Company, Loudonville, Ohio, 1963.



- <sup>54</sup>Young, Hugo H. to George B. Smith, May 5, 1925, Loudonville, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 87-11.2-163F.
- <sup>55</sup>Leslie, pp. 203 - 204.
- <sup>56</sup>Leslie, p. 204
- <sup>57</sup>"Miss Ohio," Yellow Truck & Coach Mfg. Co., in Kettering Papers Collection, Cleo Redd Fisher Museum, Mohican Historical Society, Loudonville, Ohio.
- <sup>58</sup>Leslie, pp. 204-206.
- <sup>59</sup>Young, Hugo H. to George B. Smith, June 12, 1925, Loudonville, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 87-11.2-163F; and Kettering, C.F. to George B. Smith, June 22, 1925, Dayton, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 87-11.2-163F.
- <sup>60</sup>Young, Hugo H. to C.F. Kettering, August 19, 1925, Loudonville, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 87-11.2-163F.
- <sup>61</sup>Kettering, C.F. to Hugo H. Young, August 24, 1925, Dayton, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 87-11.2-163F.
- <sup>62</sup>Young, Hugo H. to C.F. Kettering, August 29, 1925, Loudonville, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 87-11.2-163F.
- <sup>63</sup>Young, Hugo H. to George B. Smith, December 22, 1925, Loudonville, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 87-11.2-163F.
- <sup>64</sup>Young to Smith, December 22, 1925.
- <sup>65</sup>Smith, George B. to H. H. Young, December 24, 1925, Dayton, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 87-11.2-163F.
- <sup>66</sup>Young, Hugo H. to C.F. Kettering, December 24, 1925, Loudonville, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 64, file no. 87-11.2-163F.
- <sup>67</sup>Historical Synopsis, p. 2.
- <sup>68</sup>McPherson, Thomas A., Flxible Professional Vehicles: The Complete History. Don Mills, Ontario: Specialty Vehicle Press, 1993, p. 15.
- <sup>69</sup>Bus production data from unpublished records of The Flxible Company. Professional car production from McPherson, pp. 309-310.
- <sup>70</sup>Sales and earnings estimates based on the following: Hugo H. Young to George B. Smith, December 21, 1929, Loudonville, Ohio; "The Flxible Company Statement of Income and Profit and Loss for the Years ended on June 30, 1928 and 1929, and Comparison," Loudonville, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 65, file no. 87-11.2-163H; and "General Ledger 1924-1931."
- <sup>71</sup>Young, Hugo H. to C. F. Kettering, August 11, 1927, Loudonville, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 65, file no. 87-11.2-163G.
- <sup>72</sup>Smith, George B. to Hugo H. Young, Dayton, Ohio, December 21, 1927. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 65, file no. 87-11.2-163G.
- <sup>73</sup>Young, Hugo H. to C. F. Kettering, April 5, 1928, Loudonville, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 65, file no. 87-11.2-163G.
- <sup>74</sup>Bureau of the Census, "Gross National Product" Historical Statistics of the United States, Colonial Times to 1970, Part 1. Washington, D.C.: U.S. Government Printing Office, 1975, p. 224, Series F1-5.
- <sup>75</sup>Young, Hugo, to C. F. Kettering, February 2, 1933, Loudonville, Ohio, Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 65, file no. 87-11.2-163I.
- <sup>76</sup>Young, Hugo to C. F. Kettering, February 2, 1933.
- <sup>77</sup>Memorandum of Visit of Mr. H. G. Cook of Haskin & Sells, attached to letter from G. B. Smith to Hugo H. Young, March 20, 1933, Dayton, Ohio, Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 65, file no. 87-11.2-163I.
- <sup>78</sup>Young, Hugo H. To George B. Smith, March 22, 1933, Loudonville, Ohio, Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 65, file no. 87-11.2-163I.
- <sup>79</sup>Budd, C. E., p. 6.
- <sup>80</sup>Plachno, Larry, Modern Intercity Coaches, Polo, Illinois: Transportation Trails, 1997, p. 78.
- <sup>81</sup>Budd, C. E., p. 6 and Plachno, p. 75.
- <sup>82</sup>The Flxible Company, "Summary of Income and Surplus For the Years Ended June 30, 1936 and 1935," attached to letter from Hugo H. Young to George B. Smith, August 22, 1936, Loudonville, Ohio, Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 65, file no. 87-11.2-163J.
- <sup>83</sup>Flxible, "Summary of Income and Surplus," June 30, 1936 and 1935.
- <sup>84</sup>McPherson, pp. 309-311.
- <sup>85</sup>Budd, pp. 6 and 9.
- <sup>86</sup>Plachno, p. 75.

<sup>87</sup>Flxible bus production data for the 1925 to 1995 period were obtained from typed Sales Department records of the Flxible Company, Loudonville, Ohio. The sale and customer for each bus is recorded in these records. Kenneth Utterback collection, Loudonville, Ohio.

<sup>88</sup>McPherson, pp. 309-310.

<sup>89</sup>The Flxible Company, "Summary of Income and Surplus for the years ended June 30, 1937 and 1936, and Comparison." Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 65, file no. 87-11.2-163K.

<sup>90</sup>Smith, G. B. to H. H. Young, Dayton, Ohio, July 1, 1937 and Hugo H. Young to George B. Smith, Loudonville, Ohio, June 29, 1937. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 65, file no. 87-11.2-163K.

<sup>91</sup>Young, Hugo H. to G. R. Gaskell, Vice President, The Winters National Bank and Trust Company, Dayton, Ohio, April 7, 1938. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 65, file no. 87-11.2-163J.

<sup>92</sup>Budd, p. 6.

<sup>93</sup>Kettering, C. F. to Hugo Young, July 7, 1939, Dayton, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 65, file no. 87-11.2-163K

<sup>94</sup>"As Loudonville Dedicated New Additions to School and Industrial Plant," *Mansfield Times Journal*, January 14, 1940, p. 12.

<sup>95</sup>"Opening of New Factory, The Flxible Company, Loudonville, Ohio." January 12, 1940, program.

<sup>96</sup>"Loudonville Turns Out to Welcome Kettering," *Mansfield News Journal*, January 13, 1940, p. 1.

<sup>97</sup>Kettering, Charles F., Speech by, at the Dedication of the New Flxible Building at Loudonville, Ohio, Friday, January 12, 1940; typed text of. (Cleo Redd Fisher Museum, the Mohican Historical Society Collection, Loudonville, Ohio.)

<sup>98</sup>Mayer, Richard D., former Secretary-Treasurer, The Flxible Company, Loudonville, Ohio, telephone interview with, June 30, 1999.

<sup>99</sup>"Yellow Coach and GM Buses: Origins and General Corporate History," *Motor Coach Age*. Vol. XLV, no. 7-8, July-August 1983, p. 12.

<sup>100</sup>Leslie, p. 204

<sup>101</sup>Richards, T. O., Head, Laboratory Control Department, General Motors Corporation, to R.A. Nitschke, December 3, 1948, Dayton, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, file no. 87-11.10-3.

<sup>102</sup>For a summary of the provisions of the Sherman Act and its application, see Richard L. Baldwin, Market Power Competition and Antitrust Policy, Homewood, Illinois: 1987, pp. 80-101.

<sup>103</sup>Baldwin, pp. 93-96.

<sup>104</sup>United States Senate, 101st Congress, 2nd Session, Report 101-286, "Amending the Clayton Act Regarding Interlocking Directorates and Officers," Report to accompany S.994 submitted by Mr. Biden, Calendar No. 543, May 14, 1990.

<sup>105</sup>The Clayton Act was amended in 1990 to raise the \$1,000,000 threshold to \$10,000,000 with a provision to increase it annually equal to the percentage increase or decrease in the Gross National Product. See "Interlocking directorates and officers," published by the Legal Information Institute of the Cornell Law School at: <http://www.apecp.org.tw/doc/USA/Policy/Ch1/19.htm>. This amendment, of course, had no bearing on the Kettering situation because of Kettering's death in 1958.

<sup>106</sup>Young, Hugo H. to George B. Smith, October 27, 1930, Loudonville, Ohio. Kettering/General Motors Institute Alumni Foundation Collection of Industrial History, Flint, Michigan, box no. 65, file no. 87-11.2-163L.

<sup>107</sup>General Motors section, Moody's Manual of Investments, 1931.

<sup>108</sup>Baldwin, p. 497-498.

<sup>109</sup>Baldwin, p. 498.

<sup>110</sup>United States of America, Plaintiff v. General Motors Corporation, Defendant, In The United States District Court for The Eastern District of Michigan, Civil Action No. 15-816, Filed July 6, 1956, pp. 7-8.

<sup>111</sup>United States of America, Plaintiff against General Motors Corporation, Defendant, In The United States District Court for The Eastern District of Michigan, Answer: Civil Action No. 15-816, Filed October 31, 1956, p. 5.

<sup>112</sup>Butler, T. P., President of The Flxible Company, interview by Robert R. Ebert, Loudonville, Ohio, October 29, 1965.

<sup>113</sup>United States of America v. General Motors Corporation In The United States District Court for The Eastern District of Michigan, Civil Action No. 15-816, "Final Judgment," stipulation entered November 30, 1965, p. 1.

<sup>114</sup>Final Judgment, Civil Action no. 15-816, p. 4.

## FLXIBLE SALES AND PROFITS 1932 AND 1933

Year Ended June 30	1933	1932
Sales:		
Buses	\$49,075.39	\$183,434.65
Ambulances, funeral & other cars	221,738.90	323,692.32
Used Cars	48,703.65	23,675.00
Accessories, parts & repairs	2,607.09	10,055.32
Miscellaneous	17,164.74	39,127.52
Total	\$339,289.77	\$579,984.81
Profit (loss)	(\$174,172.00)	\$2,511.09
Corporate Surplus (Deficit)	(\$70,690.82)	\$103,481.18

*Table 1 - Statement of Income and Deficit For the Years Ended June 30, 1933 and 1932, and Comparison.*

### A CHRONOLOGICAL HISTORY OF FLXIBLE

- 1913 Hugo Young established the Flxible Side Car Co. along with Carl Dudte in Mansfield, Ohio
- 1914 A factory was leased in Loudonville; ultimately production is concentrated there.
- 1914 The Flxible Side Car Company incorporated.
- 1915 Charles F. Kettering invested in Flxible.
- 1919 Name changed to The Flxible Company.
- 1924 First Flxible bus built.
- 1925 Buses and ambulances/funeral cars in regular production.
- 1937 Flxible Clipper introduced.
- 1946 Postwar Clipper design introduced (updated as Visicoach in 1950 and Starliner in 1957).
- 1953 Flxible enters transit bus industry and exits the funeral car/ambulance industry for the first time.
- 1955 VL100, Two-Level design introduced in intercity coaches.
- 1959 Flxible re-enters the funeral car/ambulance business.
- 1965 Flxible leaves the funeral car/ambulance industry for the last time.
- 1970 Flxible leaves intercity bus market.
- 1970 Flxible acquired by Rohr Industries.
- 1975 Final assembly transferred to Delaware, Ohio.
- 1978 Flxible acquired by Grumman Corporation.
- 1983 Flxible acquired by General Automotive Corporation.
- 1995 Last Flxible bus produced.
- 1996 Flxible files for bankruptcy, assets auctioned.

# Dreaming of What Might Be: William Stansell, London Motors and the London Six, 1921 - 26

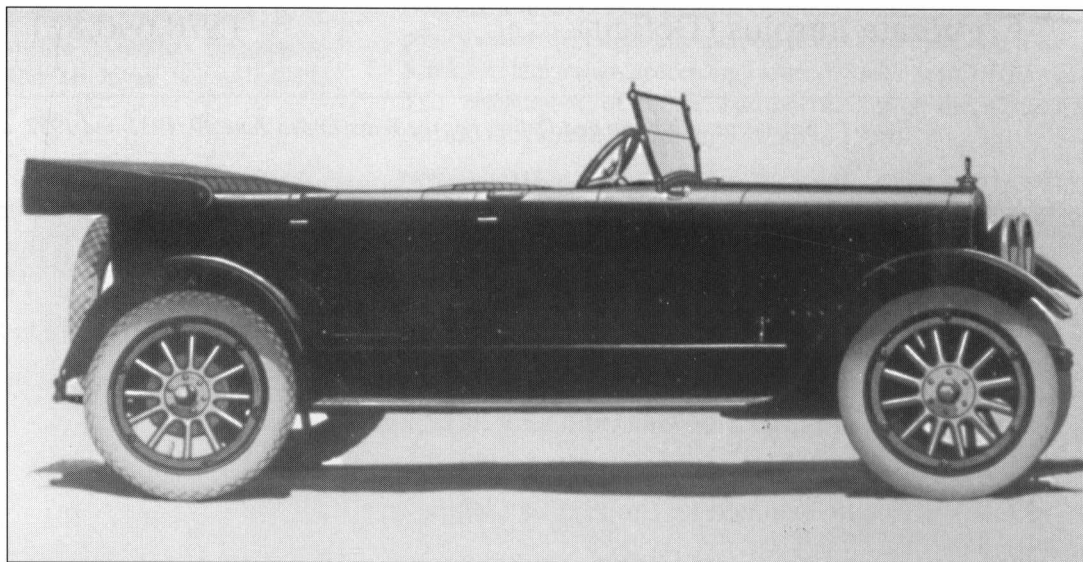
**Douglas Leighton** *recounts the history of a little-known Canadian car whose fate was no different than many of its brethren south of the border.*

“It was the best of times, it was the worst of times”: set in the time of the French Revolution and the Terror, the opening sentence of Charles Dickens’ *A Tale of Two Cities* might also be applied to the years following World War I. Recovering from more than four years of conflict, Canadians, especially, were optimistic about their future. They had discovered a new sense of national identity during World War I, but at a terrible cost: nearly 61,000 out of a nation of 8.5 million people had died in battle, while another 173,000 suffered wounds. Those who survived the war and the Spanish influenza which followed it saw a bright future of peacetime prosperity ahead. That vision would begin to become real by the middle of the following decade, but not before the country weathered a post-war recession which persisted until 1923.<sup>1</sup> For businesses attempting the transition to a peacetime economy these years were full of both promise and danger.

These were exciting and dangerous years for the automobile industry too. As wartime contracts expired, manufacturers brought new knowledge, new hopes and new companies onto the automotive scene. H.M. Leland’s Lincoln, Fred and August Duesenberg’s company, and cars named for war heroes such as Eddie Rickenbacker would all find places, however briefly, in this post-war automotive landscape. Even that most flamboyant of entrepreneurs, William C. “Billy” Durant, would have a last fling as the chief executive of General Motors before being finally forced out of the company he had founded nearly a decade and a half before.

In such circumstances, it was hardly surprising that energetic visionaries should dream dreams on a smaller scale. One such man was William Stansell, a former baker’s apprentice from Courtland, Ontario. Quickly leaving his original trade behind, Stansell first sold bakery equipment and then gravitated to Detroit and the automobile industry.<sup>2</sup> Employed by Packard for a time at the end of the war, he was

hired by the Deby Truck Company to supervise its Canadian operations in Chatham. Here he began to plan the design and manufacture of a “high-end,” powerful line of automobiles which would appeal to the well-to-do and professional classes. Assembled from the best possible components, his car would carve out a profitable market niche and make possible the



*Artist's rendering: London Six Touring (1921?).*

creation of an extended family of automotive producers and suppliers. Stansell would try to duplicate, on a smaller scale, the simultaneous successes of better-known automotive executives like Billy Durant.

Stansell’s timing, so evidently poised to exploit post-war prosperity, instead led to failure. Not only did the prolonged post-war recession play havoc with his dreams, so too did changes in the automobile industry itself. This was the first great age of automobilization; a time of triumph for mass production and a time of corporate consolidation. Small firms dependent on outside suppliers to produce assembled cars were already obsolescent. An undertaking that seemed full of promise in 1920 was in serious difficulty by 1923 and had expired by 1926. London Motors manufactured only about 98 automobiles rather than the thousands of which William Stansell had dreamed.

After attempting unsuccessfully to establish production in Amherstberg, Ontario, on the Detroit River just south of Windsor, Stansell turned his attention to London, Ontario, a city

of some 60,959 people located almost exactly midway between Detroit/Windsor and Toronto.<sup>3</sup> A prosperous regional commercial center, the city possessed the financial depth and the manufacturing skills necessary for industrial success. Known before the war for its cigar manufacturing, London had a long tradition of stove production, foundry work and petroleum refining. Firms like McLary Brothers (later General Steel Wares), the Leonard Foundry, Dennis Ornamental Iron and Imperial Oil formed a diverse industrial base for the local economy along with financial concerns like the London Life Insurance Company and the Huron and Erie Mortgage Company (later Canada Trust). Skilled carpentry and cabinet-making were evident in local and regional furniture and casket factories.

This conjunction of financial and industrial resources had already attracted elements of the automotive industry. Fred Harding, a local machinist and entrepreneur, marketed a light car, the Harding Four, as early as 1911. The Ford Motor Company had established a regional assembly plant for the Model T in the city by 1916. In 1915, local investors in nearby Mount Brydges, had set up a company to manufacture a Canadian version of the Crow-Elkhart named (what else!) the Canadian Crow. At the end of the war, Ruggles Trucks of Michigan had built a plant in the city's industrial east end and two local mechanics had also gone into the business of truck making under their surnames, Barton and Rumble<sup>4</sup>. London clearly possessed several advantages for a would-be automotive producer: industrial and financial capacity, a skilled and experienced work force and excellent rail connections. Both Canadian Pacific and Canadian National served the city.<sup>5</sup> A shorter local line, the London and North Stanley Railway provided access to Lake Erie and shipping on the Great Lakes.

Signs of prosperity abounded. London's population was growing rapidly from 37,976 in 1901, to 71,948 by 1931, an increase of just over 89% in three decades. Canadian automotive registrations nearly tripled in the "roaring twenties"; rising from 468,000 to 1,235,000 by 1930. Many American firms established branch plants in the country, both to avoid the 35% tariff on imported passenger cars and to take advantage of Canada's access to overseas markets through membership in the British Empire. Fully one-third of Canadian auto production in this period was destined for export.<sup>6</sup> William Stansell wanted to tap into this expanding domestic and overseas market.

Negative economic indicators were also evident. Canada was clearly in the grip of recession in the early 1920s. 1921 was a particularly hard year: the gross national product fell by 20% in twelve months, while the unemployment rate rose from 3.4% in 1919 to 8.9% two years later. Canadian exports declined by 42% from 1920 to 1922. Companies went bankrupt in increasing numbers, the most spectacular failure being that of the Home Bank of Toronto in August 1923.<sup>7</sup> Changes in the automobile industry reflected these economic difficulties and followed new ideas about corporate organization and factory production. Consolidation seemed to be the only way to combat failure, as companies either merged with others or disappeared. As early as 1918, McLaughlin of Oshawa had merged fully with its American partner, General Motors, to become General Motors of Canada. Smaller firms had not been as fortunate: Parker of Montreal folded in 1923 and Gray-Dort of Chatham

closed in 1924. By 1926, only 14 Canadian car companies existed; there had been as many as 70 before World War I. Most of the survivors were subsidiaries of larger U.S. firms. Establishing a new firm in such a business environment would clearly be an uphill struggle.<sup>8</sup>

William Riley Stansell was well-suited to these initial challenges. Born in 1881, he was an energetic visionary at the height of his powers.<sup>9</sup> Both he and his brother Walter had demonstrated mechanical aptitude at an early age. Walter was fascinated by steam power and eventually built working scale-model engines, some of which are still in the possession of his family near Eden, Ontario.<sup>10</sup> Described as "a man of foresight, imagination, and creativity" by a great-nephew<sup>11</sup> and as "a chubby little guy full of energy" by his surviving daughter Beatrice,<sup>12</sup> William left rural southwestern Ontario for the greater opportunities in early 20th-century Detroit. A man of considerable presence who was always immaculately dressed and "turned out," he possessed great persuasive powers.<sup>13</sup> By the autumn of 1920, he had clearly worked out the basic features both of his proposed company and its product, which would be called the London Six. By January 1921, London Motors Limited had been incorporated under Ontario law.<sup>14</sup> William Stansell's dream was about to become a reality.

Authorized to issue stock to the value of one million dollars, the company claimed in a 1922 brochure that over 60% of its preferred shares and more than 93% of its common shares had been sold.<sup>15</sup> No doubt some of these transactions were paper transfers involving officers of the company, but even allowing for commercial hyperbole, selling the majority of the company's 100,000 shares at ten dollars each was a considerable accomplishment. Stansell clearly used local pride as a sales tool and targeted professional and commercial middle-class Londoners as his prime market. Initial investors were sometimes persuaded to increase their holdings when the company found itself in difficulty in 1923.<sup>16</sup> The company's collapse and Stansell's ouster in 1926 caused a great deal of bitter feelings in the community. One piece of anecdotal evidence suggests that among local institutional investors was a church congregation which was so angry over its losses that it would permit no inquiries about its role in the collapse of London Motors. A second sign of longstanding bitterness was a letter received by the author after a request for information was made in the local newspaper, *The London Free Press*. Bearing no identifying mark, carefully sealed and presumably mailed locally, the empty envelope contained on the inside of its front panel the following handwritten message: "Stansell? Get a life! We did."<sup>17</sup> These angry words were written nearly 74 years after London Motors, had ceased to exist!

William Stansell's limitless idealism can be seen in his description of the company's purpose and in his projection of its financial performance. According to its prospectus, London Motors Limited had been incorporated to "manufacture, buy, sell, import, export and deal in all kinds of automobiles, motors, motor trucks, motor cars, flying machines and vehicles, and their accessories, and to establish and conduct businesses subsidiary to and related to the above industry."<sup>18</sup>

Billy Durant and E.L. Cord could scarcely have improved such a far-reaching description. Stansell was even

more sanguine about the company's potential profits, claiming that running its operations at capacity would result in a gross profit of \$2,700,000 and a "positive" net profit of \$2,030,000 per year. He claimed that these figures were "authentic and available".<sup>19</sup> Surviving partial internal memoranda suggest that the company planned to make up to \$1,500.00 gross profit per vehicle.<sup>20</sup> Using that figure as a guide results in a theoretical production of up to some 1800 cars per year. Interpolating further, Stansell must have expected to produce 34 to 36 cars per week or about seven per day. Given the retail price range of the London Six, \$2,900 - \$3,700, and the obsolescent craft-style of production that was used, these figures were exceedingly optimistic.

Outside suppliers were another source of concern for Stansell. Given that the London Six was an assembled car using the best proven components, London Motors Limited was very much dependent on other manufacturers. This was clearly a problem for the company as early as 1922. Surviving correspondence with Continental Engines and Columbia Axles indicates that William Stansell was attempting to form an extended corporation to reduce his supply vulnerability, particularly with respect to engines.<sup>21</sup> His first supplier, Herschell-Spillman of North Tonawanda, New York, was itself in financial difficulty at this point. While both companies were cautious about Stansell's proposals, they warmly endorsed both his financial prudence and the quality of his product. "There is a tendency," wrote O.R. Baird, General Sales Manager of Continental Motors, "among investors in Canada to be too conservative . . . undoubtedly we take greater risks here than you people . . ." <sup>22</sup> One of the principal ingredients for Stansell's failure perhaps lay just here: Canadian investors wanted quick returns with minimal risk to themselves. Stansell's own nature, idealistic, entrepreneurial and energetic, contrasted with the conservatism of his backers and shareholders in the declining economy of the early 1920s.

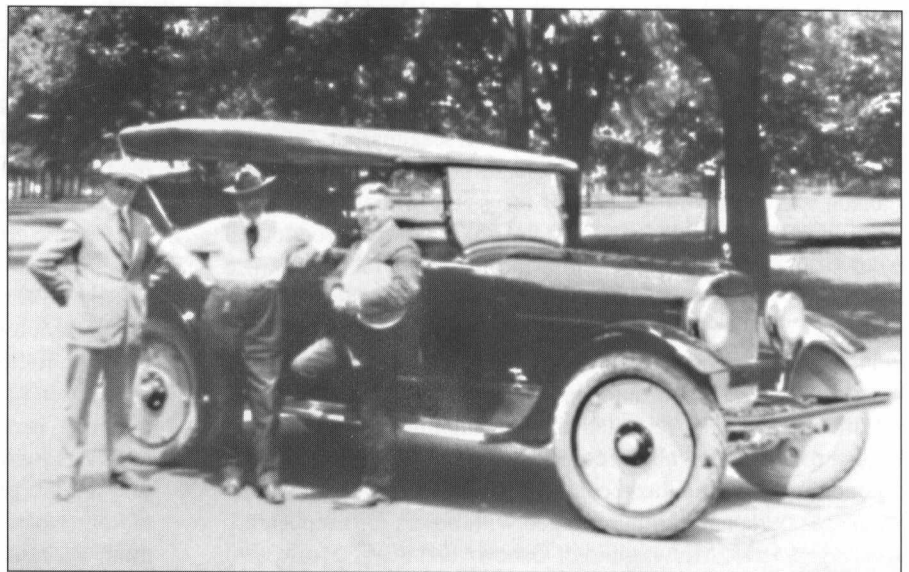
Stansell subsequently urged his sales force to greater efforts. Much of his surviving correspondence consists of information packages and homespun verse designed to keep up sales morale. Price charts of competing U.S. makes were prepared, pointing out that, for example, Packards sold in Canada for between \$7,200 and \$10,200 or two or three times the price of the London Six.<sup>23</sup> Other comparisons demonstrated that even low-cost cars like Ford and Chevrolet sold in Canada at prices from 50 to more than 80% above their U.S. factory lists.<sup>24</sup> The implicit message was patriotic: it was better to buy a Canadian-made car than a U.S.-designed one which was excessively "marked up". Even in their Canadian \$700 - \$800 range, however, Fords and Chevrolets were less than one-quarter the price of the London Six.

Advertising the London Six to prospective buyers occupied a great deal of William Stansell's time. He used a variety of methods to bring the car to public attention and to attract purchasers. Early in 1921, the first

production model was shown at the London Motor Show, held at the local armories in the middle of the downtown business district. Later that year, a London Six was exhibited at the Canadian National Exhibition in Toronto, where it evidently attracted favorable comment. Stansell himself demonstrated the car locally at every opportunity, putting together a professionally-photographed, canvas-bound, factory booklet that posed various models against well-known local backdrops: Victoria Park in the center of London, the Boer War Memorial, Sir Adam Beck's mansion, "Headley" and Springbank Park, a popular suburban excursion and picnic site, were all used in this way.<sup>25</sup> (Figure 1)

Stansell believed that the London Six's greatest advertisement was the car itself and he regularly demonstrated its capacities to others. On one or two occasions, he drove from Windsor to Toronto, leaving ten minutes after the passenger train between the two cities and arriving as much as ten minutes ahead of it.<sup>26</sup> He would drive to Hamilton, Ontario, some 76 miles from London, to demonstrate the Six's hill-climbing capacity, letting it idle up the Niagara Escarpment—called The Mountain locally—in high gear. On at least one occasion, he arranged a comparison with a Packard, which he seemed to regard as his chief competition: the Packard stalled before reaching the top of the 300-foot limestone ridge.<sup>27</sup> He also displayed the car to suppliers. The comment of B.D. deWeese of the Columbia Axle Company make it clear that they were impressed: "the London Six (is) a far better car than the average owner appreciates until he runs and drive one. I know of no Canadian make of car which offers so much for the money."<sup>28</sup>

Stansell also enjoyed endorsements from early purchasers. Two well-known Londoners wrote enthusiastically about their experiences with the London Six. Dr. Norman F. Schram, a well-known local practitioner, wrote on June 1, 1922, that "(I) have driven it continuously in my practice . . . and . . . have not had the slightest trouble with it. The more I drive it, the better I like it." John A. Nash, a jeweler and optician, reported



*Fig. 1 - London Six Touring, Victoria Park; London, Ontario 1922.  
(l to r): H.W. Soper, Chief Engineer; Joseph "Joe" Worsch; investor William Stansell*

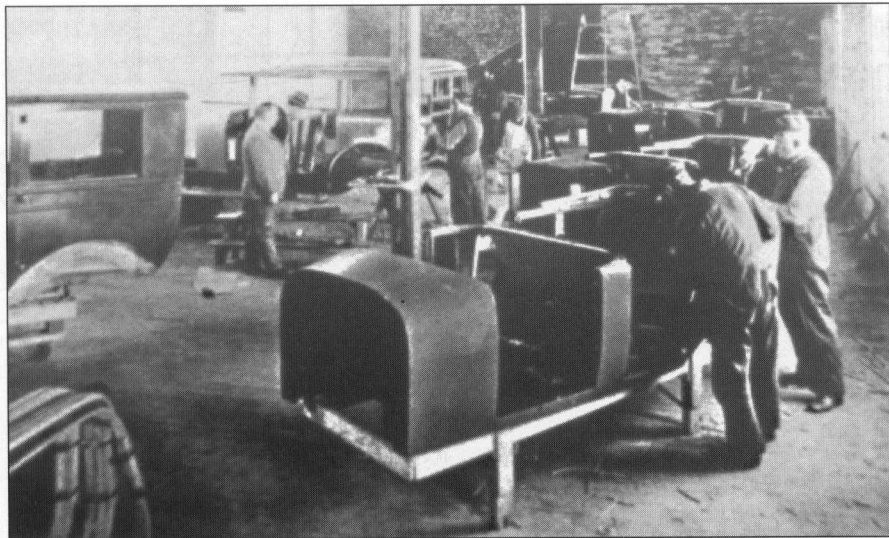
nine days earlier that his London Six would “idle for miles and miles at one mile per hour without a miss and as smooth as velvet . . . Climbing hills is like gliding on the smooth pavement”.<sup>29</sup> London Six customers sometimes used their cars in ways that Stansell could not report. One local anecdote described how an owner had his car specially constructed with secret compartments for cross-border smuggling. Alas, concludes the story, he was caught!<sup>30</sup>

Stansell’s greatest public relations triumph occurred in April 1922. Founded in London in 1878, Western University had held classes in a variety of locations until its board of governors succeeded in obtaining a new site on farmland just north of the city limits. They arranged for the governor-general, Lord Byng of Vimy, to turn the first sod for the new buildings on April 15, 1922. Byng, who had for a time commanded the Canadian Corps on the Western front during World War I, was much-loved by his former soldiers and widely-known, William Stansell saw a heaven-sent opportunity for London Motors in the vice-regal visit. Hastily assembling a small fleet of London Sixes from factory cars and some private owners, he had Lord and Lady Byng transported to and from the ceremony in his cars. Lady Byng commented that the car in which she and her husband travelled was the most comfortable one she had ever experienced.<sup>31</sup>

At the same time as this public relations triumph, the company was completing its move to new and larger premises. When he first established the London operation, Stansell had located it just east of London’s city limits, on Hale Street. Here he had access to city advantages without city restrictions. Located on the west side of the street immediately south of the Canadian National Railway’s main line, the three-story white building bore a large sign reading, “Future Home of London Motors and the London Six.”<sup>32</sup> The Stansell family initially lived nearby. Within a year, however, London Motors had acquired the site of the Victory Garage on downtown King Street, quickly adding a number of smaller buildings around the corner on Ridout Street, extending south to York Street. In its 1922 prospectus, London Motors claimed 48,000 square feet of factory floor space plus 12 other buildings bringing in a total rental of \$4,004 per year.

Some of this expansion was financed by the company, but most of the property seems to have been heavily mortgaged. The Hale Street location, for example, was mortgaged to Dr. Septimus Thompson, a widely-known ophthalmologist. When London Motors failed, Dr. Thompson used the land to provide pasture for prize-winning Arabian horses, eventually selling it for residential development.<sup>33</sup> The downtown site was advantageously located, particularly because it was next door to a woodworking firm that, on occasion, provided wooden frames for London Six bodies when the regular supplier, a casket company in nearby Ingersoll, could not do so.

To the modern eye, the processes used to produce London Sixes appear to be London Motors’ weakest point. The

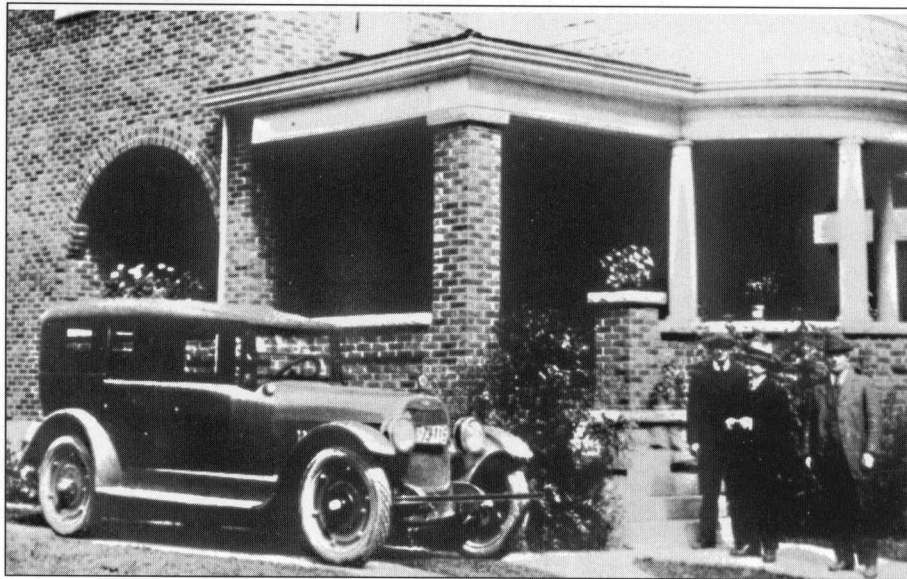


*Fig. 2 - Body assembly, London Motors Ltd., 1922  
(William Stansell, left background)*

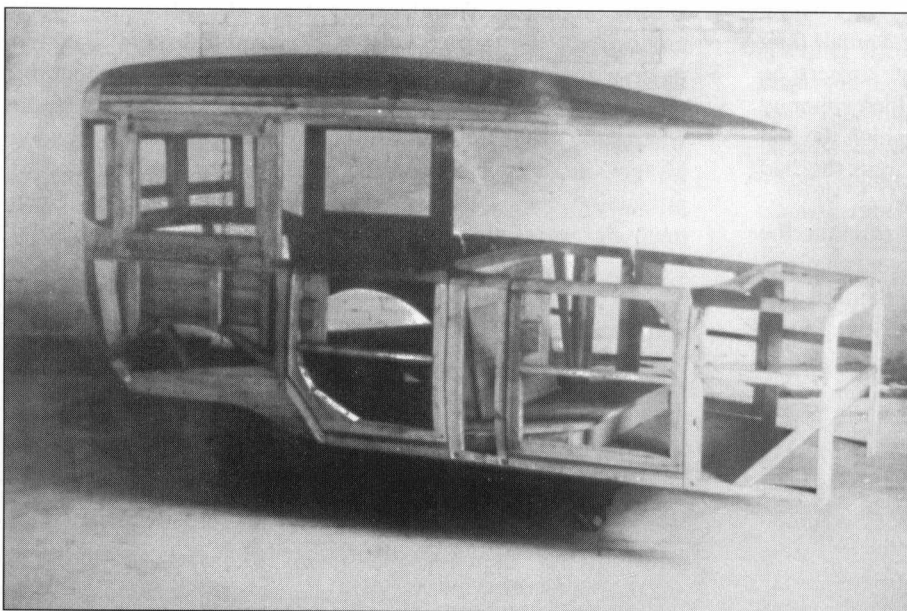
interior of the building appears to be low-ceilinged, ill-lit and shabby (Figure 2). There is no evidence of modern automobile production: no assembly lines, no overhead parts lines, no modern equipment. Chassis and bodies were moved about the shop on rollers to workers in various “departments” until the car was nearly complete and rolling on its own wheels. London Motors, in short, practiced the hand-built or craft method of production rather than modern assembly techniques. Such methods were already obsolete, reflecting the industrial landscape of the late 19th century rather than that of the 20th.

Following the collapse of the firm, the premises reverted to automobile service and sales. After World War II, F.A. Buskard and Sons, a Chrysler dealership, occupied the site for many years. When that business changed ownership and moved to a suburban location, the building became a restaurant, featuring a smorgasbord that ran most of its interior length. “The new owners, aware of its history, named their business The Garage” and organized their menu around automobile themes.<sup>34</sup> Recently renovated again, the former home of London Motors is today subdivided into offices.

The overall design of the London Six itself provided a stark contrast to these obsolescent patterns of manufacture. William Stansell’s experience with Packard during his years in Detroit no doubt influenced his thinking. Conservative in his mechanical approach, he used only components of proven quality and durability. Yet Stansell was innovative in attempting to meet the requirements of potential purchasers. The “skin” of the body for each model was made of aluminum to save weight and provide a better power-to-weight ratio. Open touring cars were available with a removable aluminum hardtop that bridged the gap between open and closed cars (Figures 3 and 4). Stansell was especially proud of this option which he had personally designed and patented. Disc wheels were supplied by the Dayton Wheel Company and were made of wood, reducing noise and tire wear. The engine was slightly sloped downward from front to rear and the rear differential was off-center to avoid excessive wear in the front and rear



*Fig. 3 - London Supreme Touring with removable aluminum hardtop. William Stansell, center.*



*Fig. 4 - Body framing, London Six, 1921 - 22.*

universal joints. The Herschell-Spillman L-head six-cylinder engine of 58 horse-power was linked to a conventional Warner three-speed transmission. Bosch electrics were used in a six-volt system. The London Six was substantial but not large for the time, resting on a 126-inch wheelbase, the same as a 1964 Lincoln Continental. Body styles included touring, roadster and sedan/limousine types, the last being particularly ungainly.<sup>35</sup>

Neither sales nor the economic climate measured up to Stansell's expectations. Almost from London Motors' inception, he busily tried to pursue amalgamation with other firms as a means of avoiding failure. Besides pursuing suppliers like Columbia Axle and Continental Engines, he evidently approached Willys-Overland in Toledo, Ohio and

Ruggles Trucks, whose London plant was going through difficulties similar to his own.<sup>36</sup> His frequent absences caused complaints from his chief stockholders and directors. By 1924, actual production had ceased and a confrontation between pro and anti-Stansell forces on the board caused Stansell's ouster in late 1925 or early 1926. The continuing directors then wound down the company.

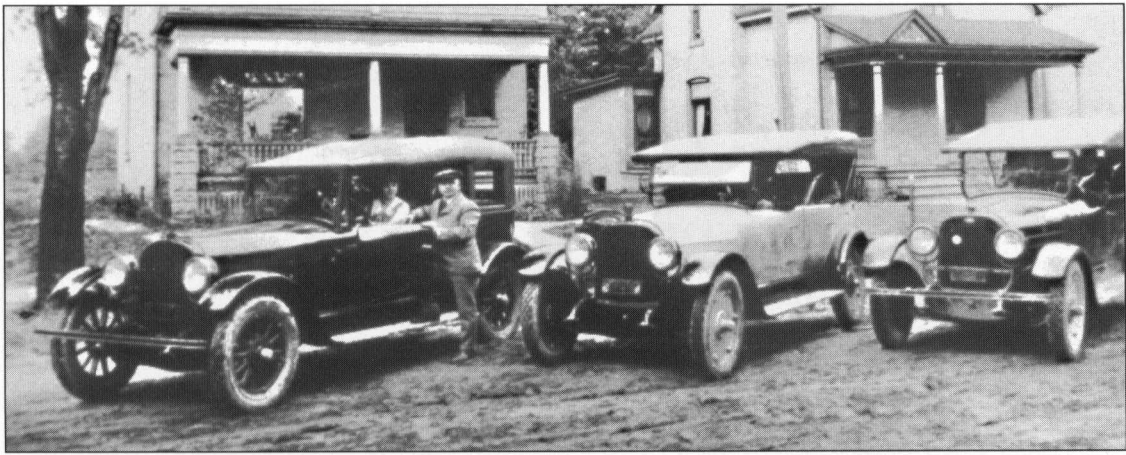
William Stansell sold real estate in London for a few years. The family, which had moved to a large house on Craig Street in London's fashionable south end in 1923, moved again to a smaller house on Emery Street, several blocks south. In 1928, the Stansells returned to Detroit, where William briefly engaged in retail car sales. During the Depression, he tried to market a bi-liquid material for table-tops which, after hardening, resembled marble. This too was a commercial failure, and by the end of the decade, the family had returned to Courtland, where the Stansells operated a roadside store. He died in Courtland on July 23, 1961.<sup>37</sup>

What of the cars he produced? The remaining rolling stock was purchased by a local garage owner who converted at least one car to a tow truck.<sup>38</sup> Two others found their way into the hands of Joseph "Joe" Wonsch, a local livery stable owner, carter and London Motors investor. Neighbors recall that Wonsch kept one car as a spare, using it after the first one became unserviceable.<sup>39</sup> As late as 1948, two London Sixes—likely Wonsch's—were sitting derelict on a vacant lot in the same neighborhood.<sup>40</sup> William Stansell himself last saw a London Six about 1935, when one passed his car on Highway 3 near Tillsonburg, Ontario.<sup>41</sup> One was reduced to scrap in Strathroy and another in nearby Parkhill. All that remains of these cars are their brass radiator badges, now in the hands of collectors.<sup>42</sup> Rumors persist that a London Six still exists in a barn somewhere to the north of

London, but these have never been substantiated.<sup>43</sup> Those cars that were not taken off the road during the Depression probably fell victim to scrap metal drives during World War II.

William Stansell was a visionary who dreamed of owning his own automobile company and producing a high-quality, powerful car. Circumstances briefly expanded the vision to one of an automotive conglomerate, producing both low and high-priced cars, trucks and components. But those same circumstances conspired to frustrate such an ambitious undertaking and cause the downfall of London Motors itself. Driven by a grand dream of what might be, Stansell had to confront instead the powerful realities of an uncertain economy and a changing automobile industry.





Three London Sixes. "Supreme" Touring on left with patented removable hardtop.  
William Stansell standing, left.

## NOTES

<sup>1</sup>For an overview of Canada in this period, see Ramsay Cook and R. Craig Brown, Canada, 1896-1921: A Nation Transformed (Toronto: McClelland and Stewart, 1974).

<sup>2</sup>Stansell Papers, Press Notice, 1922.

<sup>3</sup>Canada. 1921 Census figure.

<sup>4</sup>See Alan Noon, East of Adelaide: Photographs of commercial, industrial and working-class urban Ontario, 1905-1930. (London, Ontario: London Regional Art and Historical Museum, 1989).

<sup>5</sup>Created by the Canadian government during World War I from several different lines, the system was first called Canadian National Railways. After 1923, the singular form was used.

<sup>6</sup>See John H. Thompson and Allen Seager, Canada 1922-1939: Decades of Discord (Toronto: McClelland and Stewart, 1985), esp. p. 345.

<sup>7</sup>Thompson and Seager, 1-13.

<sup>8</sup>Thompson and Seager, 85-88.

<sup>9</sup>Stansell Papers, Press Notice, 1922.

<sup>10</sup>Interview, Ms. Terry Stansell, Eden, Ontario, March 1999.

<sup>11</sup>Letter, Arnold Stansell, Aylmer, Ontario, March 11, 1999.

<sup>12</sup>Interview, Beatrice Stansell Burnett, *London Free Press*, November 20, 1999.

<sup>13</sup>Interview, Beatrice Stansell Burnett and Jane Burnett Logan, Woodstock, Ontario, May 21, 1999.

<sup>14</sup>Stansell Papers, Company Prospectus, 1922.

<sup>15</sup>Ibid.

<sup>16</sup>Interview, Betty Arscott, London, Ontario, March 11, 1999.

<sup>17</sup>Letter, March 1999.

<sup>18</sup>Stansell Papers, Prospectus, 1922.

<sup>19</sup>Ibid.

<sup>20</sup>Stansell Papers, undated memo.

<sup>21</sup>Stansell Paper, O.R. Baird to Stansell, March 15, 1922. B.D. deWeese to Stansell, March 13, 1922.

<sup>22</sup>Baird to Stansell, *op.cit.*

<sup>23</sup>Stansell Papers, price comparison, undated.

<sup>24</sup>Ibid.

<sup>25</sup>Stansell Papers, photographs.

<sup>26</sup>Charlie Whipp, "Story of the London Six . . . A Great Car In Its Day," *London Free Press*, February 27, 1960.

<sup>27</sup>Ibid.

<sup>28</sup>deWeese to Stansell, *op.cit.*

<sup>29</sup>Stansell Papers, Schram to Stansell, June 1, 1922. Nash to Stansell, May 23, 1922.

<sup>30</sup>Interview, Dr. Charles Thompson, London, Ontario, November 1999.

<sup>31</sup>Video, The New Campus, U.W.O. 1995.

<sup>32</sup>Interview, Jerry Lowell, London, Ontario, March 1999.

<sup>33</sup>Dr. Charles Thompson, *Op.cit.*

<sup>34</sup>Stansell Papers, restaurant menu.

<sup>35</sup>Stansell Papers, specification sheet and illustration.

<sup>36</sup>Charlie Whipp, *op.cit.*

<sup>37</sup>*London Free Press*, July 26, 1961.

<sup>38</sup>Charlie Whipp, *op.cit.*

<sup>39</sup>Interview, Douglas Flood, London, Ontario, March 1999. Interview, Betty Wonsch, Port Franks, Ontario, March 1999.

<sup>40</sup>Interview, Wayne Saunders, Dorchester, Ontario, March 1999.

<sup>41</sup>Charlie Whipp, *op.cit.*

<sup>42</sup>Interview, Clinton Gilbert, Parkhill, Ontario, November 24, 1999.

<sup>43</sup>Wayne Saunders, *op.cit.*

# “You Know Me!”

## Barney Oldfield and the Creation of a Legend

Mark D. Howell tells how America's first race driver nurtured his mythic status

Professional sports and the media have been bedfellows since before the dawn of the 20th century. As sports became big business, it was natural for nationwide coverage of athletes and events to emerge and create what we might call “media celebrities” today. Athletes attracting attention were often more than household names; however, as professional sports became an important part of early 20th century popular culture in America, some sports figures became mythical heroes, rising above their sporting exploits to serve as role models or symbols of all things distinctly “American.”

Such mythic status is found in the life and times of Berna Eli “Barney” Oldfield, who was born the son of a poor Midwestern farmer, evolved into the best known racer of his day, and remained —after his death — synonymous with all things involving automobiles and speed (Fig. 1). His heroic public persona as the “daredevil dean of automobile racers” made Oldfield a real life Horatio Alger story. Oldfield pulled himself up by the bootstraps from a working class background and gained national fame as a farm boy who could beat America's wealthiest young men at their own game.

It was Barney Oldfield's ability to attract America's developing mass media that enabled him to become one of the world's greatest folk heroes during the first half of the 20th century. The development of such media as motion pictures, radio, and widely-distributed and recognized periodicals like big city newspapers and popular magazines put Oldfield before an international audience fascinated by his ability to master the mysterious modern technology of the automobile. As many Americans traveled about in horse-drawn buggies and wagons, it was Barney Oldfield who tamed the

internal-combustion engine and showed the promise of its future.

Berna Oldfield was born near Wauseon, Ohio, on January 29th, 1878, in a log cabin—historically appropriate for someone destined to become an American folk hero. His father was a Civil War veteran who received a parcel of farmland as his military pension, and his mother was a daughter of the local blacksmith. Berna and his younger sister, Bertha, spent the early years of their lives on the family farm in rural Northwest Ohio, not far from the Michigan border.

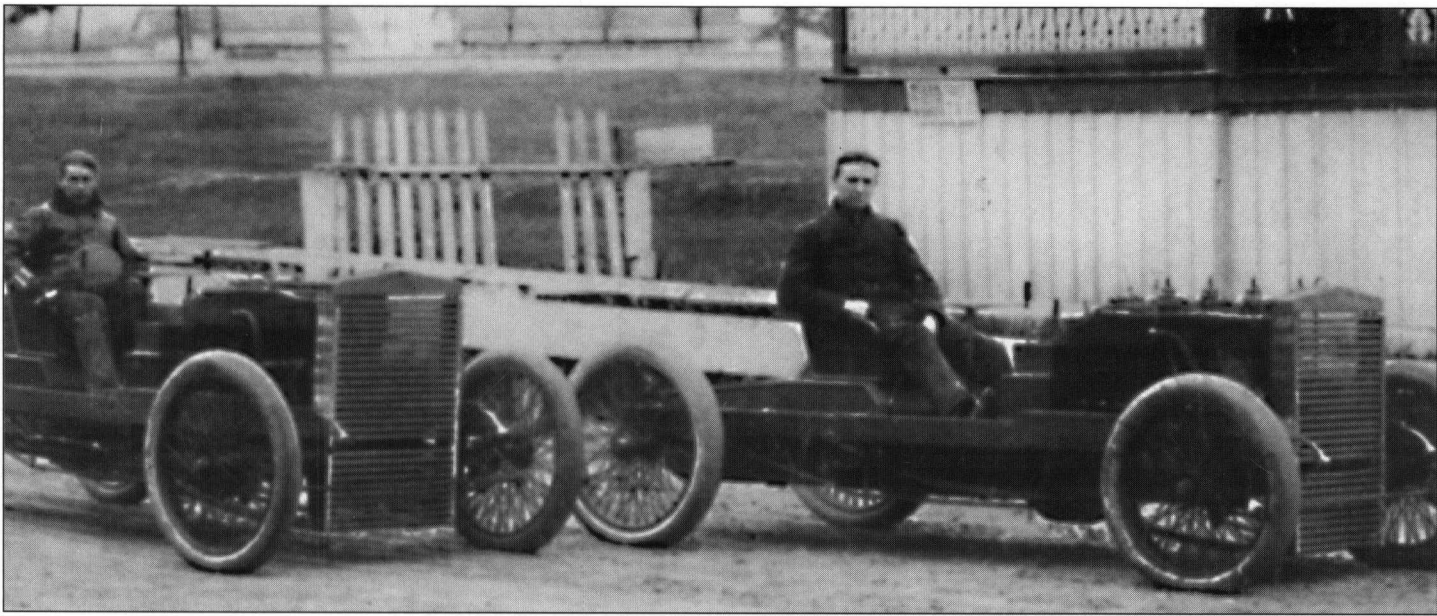
The Oldfields moved to Toledo, Ohio, following the severe winter of 1888 with hopes of finding better educational and work opportunities. By the end of 1893, just short of 16, Berna had quit school and taken a job as a hotel bellhop. This job taught him how to deal with the public, a skill that would benefit him in the future. It was also where he earned the nickname “Barney”; his male co-workers thought the name “Berna” was too feminine for such a rugged young man.

While working as an elevator operator at the Monticello Hotel in Toledo (what Oldfield often referred to as his first “driving” job), Barney got to try the popular Victorian Era pastime of bicycling. A permanent tenant at the hotel owned a racing bicycle, so Barney would “borrow” the cycle after the man went to bed, ride through the streets of Toledo all night, then return it before the man left the hotel each morning.

Oldfield rode his first bicycle race in 1894, an event covering 18 miles through Northwest Ohio. Barney finished second out of 17 riders, a feat that prompted him to embark on a racing career. The teenager rode for the Dauntless factory



Fig. 1 - Barney Oldfield behind the wheel of the pace car for the 1920 Indianapolis 500, a Marmon 34.



*Fig. 2 - Barney Oldfield ("999") and Tom Cooper ("Red Devil") aboard Ford racing cars, c. 1903.*

bicycle team in 1895 and wound up finishing second in three races during the Ohio championships. Barney's parents considered racing "a fool's game," yet the young man turned professional and developed a reputation as an aggressive and fearless rider while barnstorming across the country.

Oldfield saw automobiles as little more than a passing fad. When a fellow bicycle racer started working with a fledgling auto maker in Dearborn, Michigan, he changed his mind. Barney Oldfield was hired as an automobile driver in 1902 after Henry Ford and one of Barney's best friends, cyclist Tom Cooper, realized that Ford's new "999" racing car was too powerful for them to handle. Oldfield accepted the challenge of auto racing, despite having never driven a car before, and wound up racing against—and soundly defeating—Cleveland, Ohio car builder Alexander Winton in a five-mile race for the "Manufacturers' Challenge Cup" at Grosse Pointe, Michigan, on October 25th.

Oldfield's victory with "999" was remarkable for several reasons. To begin with, Alexander Winton was an experienced race driver, even if he struggled in the Grosse Pointe event. Barney was an experienced racer, but none of his success had come from automobiles. His wins and speed records came from his physical exploits on a bicycle, not his abilities manhandling the weight and horsepower of an automobile. Because of his convincing win over Winton, Barney Oldfield gained national recognition as a hero of the emerging motoring era.

Oldfield and Tom Cooper were the first two cyclists to try to make a living through the sport of automobile racing (Fig. 2). Many early 20th century automobile racers were either car builders or wealthy sportsmen who could afford one of these new machines. Oldfield was the first to beat these sportsmen at their own game, breaking the barriers of social and/or economic status. The teaming of Oldfield and Cooper signaled a change in American auto racing. Drivers were now hiring themselves out to the highest bidder—usually wealthy car owners—and operating as professionals. Existing horse tracks made for con-

venient speedways, and Americans became fascinated with speed and the sport of automobile racing. Oldfield's rough hewn personality and rugged athleticism made him a unique addition to the sport.

Ford's "999" was difficult for anyone—including the talented and courageous Oldfield—to drive because of its tiller steering and exposed shaft on top of the engine (see cover). Oil from the shaft would blow back into Oldfield's face. Despite this inconvenience, he was able to make history by becoming the first person to drive a gas-powered automobile at better than a mile a minute. On June 20th, 1903, he covered a mile in 59 3/5 seconds and captured the American imagination.

By late 1903 Barney Oldfield was a professional race car driver; he even had his own press agent (something often attributed to present-day professional athletes). Alexander Winton gave Barney a contract with a yearly salary of \$2,500, coverage of all expenses, and the chance to retain all prize money earned. The "working class" driver was on his way to becoming wealthy. Being a good and loyal son, Oldfield used the first of this new income to pay off his parents' mortgage on their ice cream shop in Toledo. During his tenure as Winton's driver, Barney Oldfield managed to set several speed records, win a beach racing championship in Florida, and kill a spectator during a race in Detroit, Michigan.

Oldfield left Winton in mid-1904 to drive for the Peerless Company, which had developed a racing car that he christened the "Green Dragon." The Green Dragon's powerful engine and drivetrain combination made it almost unbeatable, and Barney Oldfield drove it to national stardom.

Oldfield raced the Green Dragon at the 1904 World's Fair in St. Louis. Dirt kicked up by a leading car blinded Barney and caused a major wreck. Oldfield drove the Green Dragon through a fence, killing two spectators and injuring 13 others—including himself. The mishap caused him to be labeled by some as "reckless." The label did little, however, to stem Barney's ever-increasing popularity with fans.

The Peerless Green Dragon was the car that earned Oldfield the title of “the daredevil dean of automobile racers.” He was seen as a brave and skillful driver, albeit one with a penchant for drinking and brawling. Stories circulated about his many adventures in taverns across America and his ability to race while nursing serious hangovers.

America went wild for Barney Oldfield. He was the one man who challenged new technology, machinery, and the future, yet lived to tell about it. He made money like there was no tomorrow because, in his chosen profession, he felt there might not be a tomorrow. With each personal appearance, crowds lined up just to catch a glimpse of the man who tamed the wild automobile. They would mob the hotels where he stayed, wait by railroad depots and sidings to see his private sleeping car, and chant his name and cheer when he stepped forward to sign autographs or shake hands. This was nothing like anyone had ever seen—a race car driver being treated like a god, a farmer’s son-turned-national celebrity. Barney Oldfield was a Horatio Alger story, only better; he was the real thing, an American success story.

As Barney Oldfield’s career evolved, so did the stories about the legend. There was the boy in Fresno, California, who rode his horse 50 miles to see Oldfield attempt a dirt track record in 1904. When Barney heard about the boy’s trip—just to see him run the Peerless—he risked his neck on a sloppy track so the boy’s journey would be worthwhile. In the process, Oldfield did 50 miles in less than 50 minutes. Not only did Barney set a record, but the boy from California rode home happy.

Then there were the cowboys in Reno who had heard about Oldfield killing a spectator in Detroit during a race. They went down to the garage to see Barney’s car for themselves. Barney’s press agent at that time, a burly Southerner named Will Pickens, approached the men and watched them as they circled the Green Dragon. It turned out they were looking for notches on the car, since that was what a man carved into the grips of his handguns to show he had killed someone.

Barney Oldfield relished America’s fascination with him, playing it to his advantage every chance he had. While barnstorming across the nation—racing at county fairgrounds throughout rural America—Oldfield would work the crowds to a fever pitch. His crew would push the Green Dragon or, later, the Blitzen Benz, out before the main grandstand. The engine would be cranked to life, and the audience would gasp when it heard the mighty power-plant misfiring. Oldfield’s mechanics would stumble about the automobile, poking and prodding around the open hood in a scramble to smooth the engine.

Barney himself would then emerge from the infield, a fresh cigar between his teeth. America’s Speed King would approach the car and cock his ear to better hear the faulty motor. With his hands under the hood, Oldfield would “adjust” the engine and make it run smoothly. The crowd would cheer with delight at Oldfield’s skill and mechanical know-how, not realizing that all he did was replace a spark plug wire that had been removed earlier in the day. This demonstration earned Oldfield the audience’s respect as a master of machinery, even though the races they would see him drive that day were all but fixed. Barney Oldfield would narrowly defeat all comers in a number of match races—mainly because the comers were all on Oldfield’s payroll.

Even Barney Oldfield’s “speed records” were questionable, mainly because one of his traveling entourage did the “official” timing. What mattered most to Oldfield was that the people who paid to see him got a good show, whether he was trying to set a record or race against the finest drivers in the world. Above all else, Barney Oldfield was an entertainer—a professional athlete who knew what spectators wanted to see and who went out of his way to guarantee they went home happy.

At his professional peak, Barney Oldfield played himself in a Broadway musical called “The Vanderbilt Cup,” which was based on the famous road races of the same name. The highlight of the show was when Oldfield and his Green Dragon took to the stage and “raced” against Tom Cooper. To make the race realistic, Oldfield and Cooper would fire up their cars, drive them onto a treadmill, and open their throttles while “driving” before a revolving backdrop. The show was popular, playing to standing-room-only audiences for ten weeks. At one point, tickets had to be purchased six weeks in advance.

On March 16th, 1910, Barney Oldfield set a world land speed record of 131.724 miles per hour at Daytona Beach, Florida. The accomplishment cemented his reputation as the “Speed King of the World.” Reporters who covered the event wrote that “only a bullet” had ever “traveled faster.” Oldfield, who set his record in the 200 h.p. “Blitzen Benz,” celebrated his

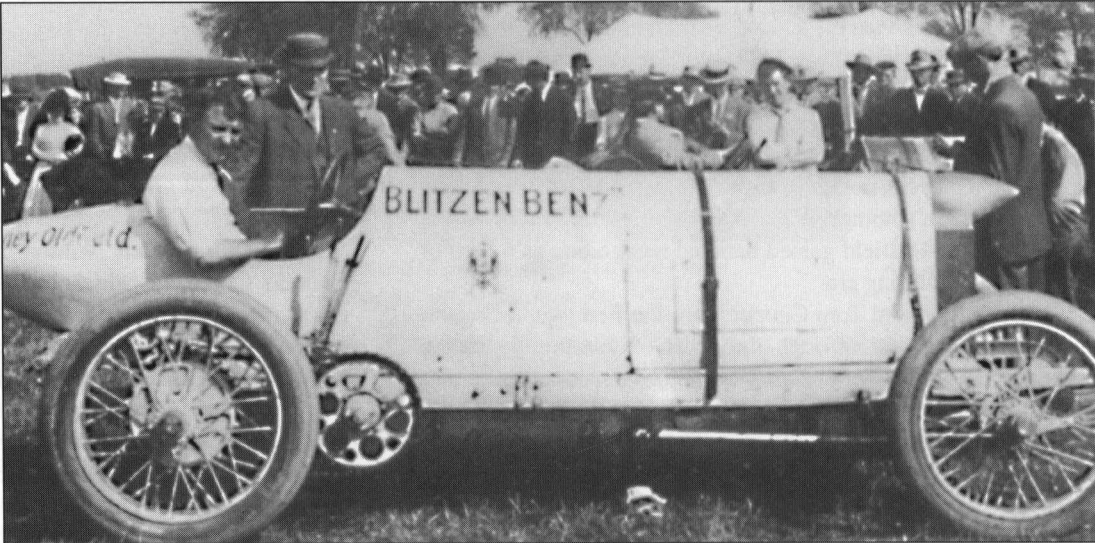


Fig. 3 - Barney Oldfield racing the Blitzen Benz at a fair, after setting the world’s land speed record in March of 1910.

success that night by getting drunk and beaten up in a local saloon (Fig. 3).

Benz used Oldfield's accomplishment as a public relations vehicle. The driver himself was now a celebrity, a household name. People followed his cars as they were towed to speedways. Children imitated him with makeshift goggles and candy cigars. He traveled to races in his own private railroad car, and crowds of admiring fans would greet him at the station wherever he went.

Oldfield and the Benz were mythical icons of the new automobile age. The nation was obsessed with the Midwestern daredevil and his high-speed exploits. Barney and the car were routinely mobbed at county fairs and speedways, and Oldfield's legend grew with each appearance he made. Barney Oldfield and the Benz became etched in automobile folklore, even though his record was short-lived and broken by "Wild Bob" Burman just 13 months later.

Part of Oldfield's legacy as a race car driver was shaped during a match race in the fall of 1910, when the Speed King accepted a challenge from Jack Johnson, the first African-American world heavyweight boxing champion. Johnson defeated Jim Jeffries, a friend of Barney's, on July 4th of that year in a Reno, Nevada prizefight. The win against Jeffries angered many white Americans who wanted a new "Great White Hope." "Papa Jack" challenged Barney Oldfield to a best-three-out-of-five match race at Sheepshead Bay, New York. Oldfield and Johnson each put up \$5,000 of their own money to sweeten the deal. Winning Johnson's money was the farthest thing on Oldfield's mind since he and Will Pickens had already sold the newsreel rights to the match races. Barney beat Johnson easily by taking the first three heats, a win that resulted in Oldfield getting suspended from championship competition by the AAA for taking part in "a crude circus act." After being suspended, Oldfield hit the road with a barnstorming act that had him racing on fairground racetracks all across America.

Barney Oldfield made a lot of money in barnstorming. In 1911, he invested some of it in a tavern on Spring Street in Los Angeles. The tavern soon became a hangout for the era's biggest sports heroes and celebrities. Oldfield always bought insurance with members of the media by treating reporters and others in the press to a free beer. Oldfield was also known for playing pranks on unsuspecting friends. His favorite gag was to slip someone a "Mickey Finn" and get a laugh at the results.

Oldfield found himself running with a famous crowd. One of his closest friends was baseball player Ty Cobb. Later in his career, people referred to Barney as the "Babe Ruth of automobile racing" because of his unpolished, hard-drinking, and rough and tumble demeanor. Cobb and Oldfield had much in common... mainly their experiences in drinking and fighting.

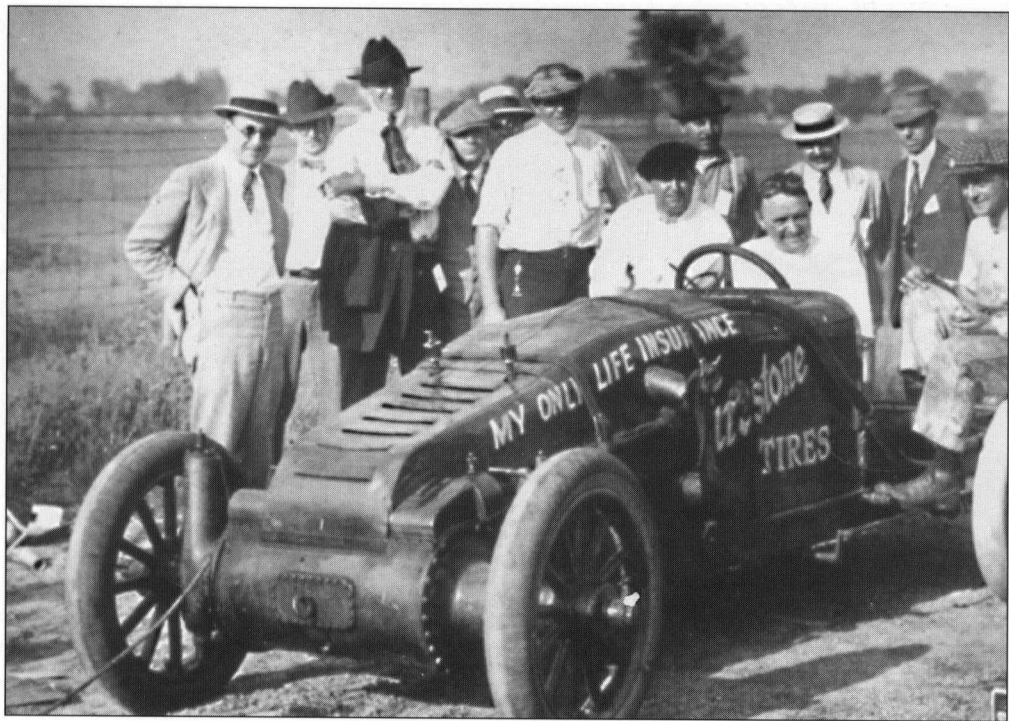


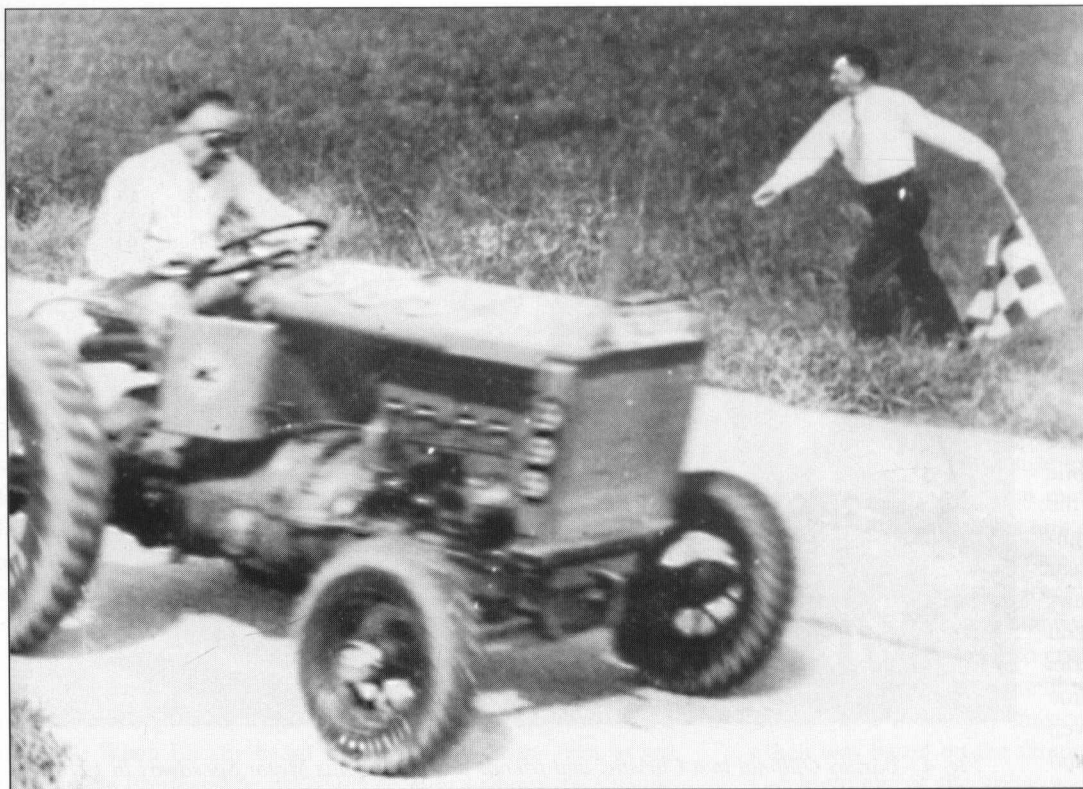
Fig. 4 - Barney Oldfield in a Christie, and friends at Indianapolis Motor Speedway in 1916.

Barney Oldfield returned to sanctioned racing competition in 1912 behind the wheel of a 300 h.p, front-wheel drive machine built by J. Walter Christie. Numerous drivers had been injured trying to control the car, which was considered to be the fastest short-distance racer in the world. Oldfield went to Cleveland and drove the "Killer Christie" to an official two-mile record of one minute, 35.8 seconds. Barney drove the Christie at Indianapolis Motor Speedway in 1916, becoming the first to circle the Brickyard at an average speed of over 100 mph (Fig. 4).

In 1914, Oldfield entered into an exhibition agreement with Lincoln Beachey, a nationally-known barnstorming stunt pilot. In their staged exhibitions, the two men would race each other in their respective machines for the "Championship of the Universe." The events were orchestrated for maximum media exposure and spectator entertainment. Audiences in various towns were treated to the best show possible. As a barnstorming act, Oldfield and Beachey were popular and financially successful. The thrill show ended after a few months, however, when Beachey was killed after crashing his airplane into San Francisco Bay.

Barney Oldfield later joined forces in 1917 with automobile engineer Harry Miller, whose cars dominated the Indianapolis 500 for many years, to construct the fastest and safest race car ever seen. Oldfield decided to tackle the innovative project after his friend and rival "Wild Bob" Burman was killed during a race in Corona, California, in 1915. Burman was thrown from the car as it rolled off the road, so Oldfield planned to build a fully-enclosed race car with a streamlined body and a cockpit welded for strength and safety. Its shape and color earned the car its name—the "Golden Submarine."

Two cars were to be built: one for track racing and one for an attempt at a new world land-speed record. Will Pickens,



*Fig. 5 - Barney Oldfield establishes a world's land speed record for farm tractors in Dallas, Texas, October 17, 1933. Note the "999" painted on the side of the radiator.*

Oldfield's press agent, told the media that the world land-speed record car would be capable of speeds in excess of 180 miles per hour. Despite such high hopes for the innovative automobile, the world land-speed record car was never built.

The track version of the "Golden Submarine" was pictured in the May 8th, 1917 issue of the *Los Angeles Times*. Its picture covered almost half a page, as the car became a national news item by itself. Barney Oldfield raced the car with lackluster results in a series of match races against Ralph De Palma and Louis Chevrolet, yet the Golden Submarine managed to break every dirt track record between one and 100 miles.

Barney Oldfield's fame as a race car driver caused him to be seen as a spokesman for American motorists, even after he retired from competition in 1917. The Firestone Tire and Rubber Company named a brand of tires after the "Speed King" and named him "president" of the line. In this figurehead position, Oldfield did little more as a corporate executive than drink away his afternoons at local saloons.

By the 1930s, Barney was hoping to recapture some of his earlier success by teaming up again with Harry Miller. This time the two wanted to try to break the world land speed record set at Daytona Beach in 1932 by England's Sir Malcolm Campbell.

The car designed for the record attempt was to measure 15 1/2 feet in length and weigh approximately 6,500 pounds. It would be powered by a 24-cylinder, 2,600 cubic inch engine capable of producing 3,000 horsepower. The four-wheel drive race car, with its independent suspension and gearing for 360 mph, would cost Oldfield and Miller about \$50,000 in 1932.

Unfortunately, the Great Depression kept potential investors away, and the car never got beyond scale model and blueprint form.

Barney Oldfield found another frontier to conquer when he decided to set a world land-speed record for farm tractors. This should not surprise us too much—he was the son of a Midwestern farmer, after all. Oldfield broke the mile-in-a-minute barrier on an Allis-Chalmers emblazoned with the legendary "999." He ran 64.2 mph at Dallas, Texas, in October of 1933 (Fig. 5). The farm tractor speed exhibitions he performed in kept Oldfield before a national audience during the Depression, despite his absence from auto racing competition.

Oldfield also served as a celebrity race official during the 1930s, even though he now had a growing disdain for the sport of automobile racing, which he said was

becoming "a morbid and brutal spectacle." Much of his unhappiness stemmed from the fact that he was never able to get funding for his speed attempt in Harry Miller's revolutionary car.

Despite this setback, Barney Oldfield remained the darling of American popular culture during the first half of the 20th century, in part because of the attention paid to him by the national media. Oldfield was a media figure and a corporate spokesman throughout his entire career, endorsing a variety of companies and products including Pepsi-Cola, Firestone Tires, Mobiloil, Plymouth automobiles, and Bosch spark plugs.

In addition to his duties as a spokesman, Oldfield was a regular in the mass media. He starred in several motion pictures between the years of 1913 and 1943, beginning with Mack Sennett's "Race For a Life" and ending with "The Blonde Comet." He wrote newspaper columns, a book about how to drive and maintain automobiles, and appeared on radio programs in Southern California. Barney Oldfield had become an American icon—a legendary personality in an automobile-centered society.

It is ironic that while Barney Oldfield THE MAN lived his later years quietly in Southern California until his death in 1946, it was Barney Oldfield THE LEGEND, the publicity-savvy showman, who was forever woven into the fabric of our nation's folklore. This Midwestern farm boy, thanks to his mastery of an emerging technology and a growing national mass media, created the formula that would result in today's generation of corporate sponsored, fan-friendly race car drivers.

# The Birth of the American Sports Car Culture: When Motor Racing Was a Sport

*The way it was before the War; sporting life in the 1930s  
as recounted by Richard Knudson*

To understand the birth of the American sports car culture, we have to go back to Le Mans where it all began in 1923.

As Barre Lyndon wrote in his 1933 book *Combat*:

“Le Mans brought the dawn of races for cars which did not require to be specially built. The owner of any sports model could enter . . . it marked the beginning of a definite change in motor-racing . . . owners of cars have ever been prone to boast about the capabilities of the machines they own. Manufacturers were finding it all but impossible to meet the cost of building special machines for true Grand Prix events. Apart from this, the designer of the first M.G. had an idea of his own about motor racing: he believed that the chivalrous amateur was essential to the sport. He knew that there existed a great company of enthusiastic men whose one ambition was to sit behind the wheel of a racing car”.

Automobile racing was well established in America by the 1920s; indeed, California had well in excess of 200 tracks during that decade. The cars being raced were the likes of extremely expensive Millers and Duesenbergs which were designed for board tracks and oval track racing. Specials appeared by the dozens, of course, but the idea of a car that could be used for town to town transportation as well as for racing was unknown. Sports car racing started in Europe at Le Mans during this period, but it wasn't until the 1930s that Americans enjoyed the experience.

In the 1930s, the automobile really came to be a part of every working family's life. Time payments plus a proliferation of used cars made this possible. The car, next to the church, was the largest influence on family life. It was at this time that the first American motorheads were created. Sammy Davis, the renowned motoring journalist from *The Autocar* staff said this about the period, “I consider the period 1930-1939 one of the most interesting in the varied history of motor racing . . . the main thing was the atmosphere which we all remember happily, but as quite different from today.”

What is the attraction in racing a sports car? Louis Armstrong was once asked to explain jazz and replied, “If you

got to ask, you ain't every gonna know.” Understanding the urge to seek risk is perhaps easier to understand now rather than back in 1930. Today there is a national orgy of thrill seeking. The rise of adventure and extreme sports like BASE jumping, snowboarding, skateboarding, and paragliding is merely the most vivid manifestation of this new national behavior. Risk taking, however is nothing new in our culture. Geneticists have even isolated the D4DR gene which is known as the thrill-seeking gene. Some of us have it, and some don't. Consider the young men who started the sports car culture in America: they had the gene, and we can be thankful they sought fulfillment in sports cars.

Most of the men we are talking about met when they were students at St. Paul's School, an exclusive school in Concord, New Hampshire. Remember, we are talking the beginnings of the sports car movement at a time when the country was in the midst of a severe economic Depression. That these men were students together at a very expensive prep school and subsequently went on to Yale or Harvard gives us some clue to their socioeconomic standing: they were from rich families. The leaders were the Collier brothers: Barron Jr., Sam, and Miles. Their father was Barron Sr. who founded the Collier advertising business which specialized in railway advertising (those small signs located above the windows on subway cars



1936: M.G. at the docks.

and commuter trains). Barron Jr. was the eldest and graduated from Yale in 1930. Sam followed in 1935 while Miles did not graduate with his 1937 class. Alan and Langdon Quimby from a prominent lumber family in Maine went to Yale at the same time.

Also at St. Paul's were Tom and Bill Dewart, and George Rand. The Dewarts went to work after St. Paul's in the family newspaper business. Rand went to Harvard where he became friendly with Dick Wharton and John Marshall. Rand eventually went to work for the Collier advertising business in 1932. Briggs Cunningham was a 1929 Yale dropout who was part of this group.

The real spearheads behind the movement were the Colliers, but Barron Jr.'s new bride can be given the credit for causing the first M.G. to come to America. While honeymooning in England in 1932, she saw several J2 Midgets on the road, liked them, and promptly bought one for her husband. It could not have fallen into more enthusiastic hands.

Barron was the oldest of the three brothers. They became enamored with sports cars during several trips to Europe where they spent time at their father's summer place in Baden-Baden. While there they did some touring and became acutely aware of the sophisticated European automobiles that were being used for all sorts of motor sport. They absorbed the spirit and soaked up enthusiasm by reading the various motoring publications from England.

Back home at the family's estate, "Overlook," which was located in Pocantico Hills, New York, they used the network of roads of driveways and service roads to race their homemade cycle cars. These were cars with small gasoline engines, crude suspension, and marginal stopping power. This activity amongst the Colliers and their friends motivated the formation of the Overlook Automobile Racing Club.

In 1930 and 1931 they raced their specials in several events on the estate. No racing took place in 1932, but in 1933 activity started on a larger scale with real automobiles such as Barron Jr.'s J2 M.G. The club changed its name to the Automobile Racing Club of America (ARCA). The purpose of the new club was stated by Miles in the first issue of the *ARCA Journal* which was published in April of 1934: "The ultimate objective of the club, however, is not so much to specifically foster road and semi-stock car races, as it is to interest amateur sportsmen in a field which offers as much as polo, bobsledding, and flying combined . . . we must emphasize that the club is as interested in Grand Prix type of track racing as in the sports type, first, however, and while the club is still young, we offer you, gentlemen, ROAD RACING FOR AMATEURS." The 1939 constitution of the club stated that the purpose, ". . . shall be to encourage the sport of racing automobiles on closed roads and circuits, and further, to encourage better and safer driving on public highways through the medium of Trials and Tours."

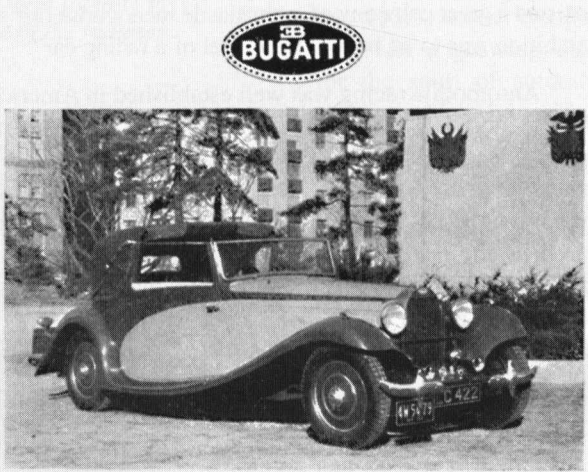
In the final point standings for 1933, Barron Jr.'s J2 was on top and Sam was second in a Henderson powered special. The next three places went to Austin drivers (Allan Quimby, Tom Dewart, and Langdon Quimby), and Miles Collier was last in another special. The most important race of 1933 was "The American Targa Florio."

George Rand, who later went on to considerable post World War II racing successes as well as holding a position on

the F.I.A. board, was an enthusiastic member of the ARCA. In 1932 he opened a garage for sales and service of sports cars in order to help finance his interest in the sport. His partners in the business were Bill Weaver and Sam Collier, and they called it WRC, Inc. The garage was located at 140 West 56th Street in New York City. Weaver was interested in Duesenbergs, Rand in Bugattis, and Sam in M.G.s. Weaver dropped out of the business shortly after it began, and the name was changed to George C. Rand, Inc. An advertisement in *The New Yorker* shows an address of 47 West 64th Street for George C. Rand (Fig. 1).

Early in 1934, Sam Collier arranged a formal agreement with the M.G. Car Company for a formal distributorship which was first called The M.G. Sales Company and later, Motor Sport, Inc. This company operated out of George Rand's building until early 1935 when it moved to the Brewster Building in Long Island City. Motor Sport, Inc. stayed in business through the 1940s; in reality it, as well as George Rand's business, was very much a part-time business as George, Miles, and Sam all worked for the Collier Company. A yearly sales of 15 M.G.s would be a good year, but that meant that the majority of the cars went to enthusiasts who wanted to participate in motor sport.

Activity in the ARCA reached a new high in 1934. A Boston region of the club was formed in addition to the New York



**INTRODUCED** to challenge the world's fastest standard touring or sports models, the 3.300 litre type 57 BUGATTI opens a new chapter in the progress of comfortable and safe motor travel.

The brakes, steering and general road worthiness are up to the highest BUGATTI standard, and the car is note-worthy for docility and flexibility.

**Prices from \$6,000 to \$7,500 delivered New York**

Sole Importer

**GEORGE C. RAND**  
47 West 64th St. New York City

EXHIBIT: STAND C-41 NEW YORK AUTO SHOW

Fig. 1 - George Rand advertises that he was the "sole importer" of Bugatti in the mid-1930s.



region, and the membership reached an all time high of 136 members. One should not try to compare this level of participation with the growth of the Sports Car Club of America after World War II, for the 1930s were Depression years and few could afford to participate. Given another time in history, the ARCA certainly would have become the major national sports car club.

During 1934 more J2 M.G.s were brought in and the overall increased activity as well as the increased performance of the cars caused the club to abandon the inadequate roads of the Collier estate for racing. Miles Collier designed a road course on some land in Pocantico Hills which was a bulldozed track three quarters of a mile long having ten curves including a hairpin. Called the Sleepy Hollow Ring, it was a narrow, dusty circuit which required a small car the likes of an Austin or an M.G. to pass; the lap record was about 35 m.p.h. What may have been America's first ladies sports car race was won that year by Barbara Collier in the J2.

In addition to racing the club also organized rallies. Quite often the rallies were planned to end at a racing event: most drivers drove their cars to and from the races they entered.

In 1935 there are records of two events at the Sleepy Hollow Ring. Other cars being raced that season included Riley, Ford-Amilcar, Bugatti, Lancia, Bentley, Austin, Willys, and Ford.

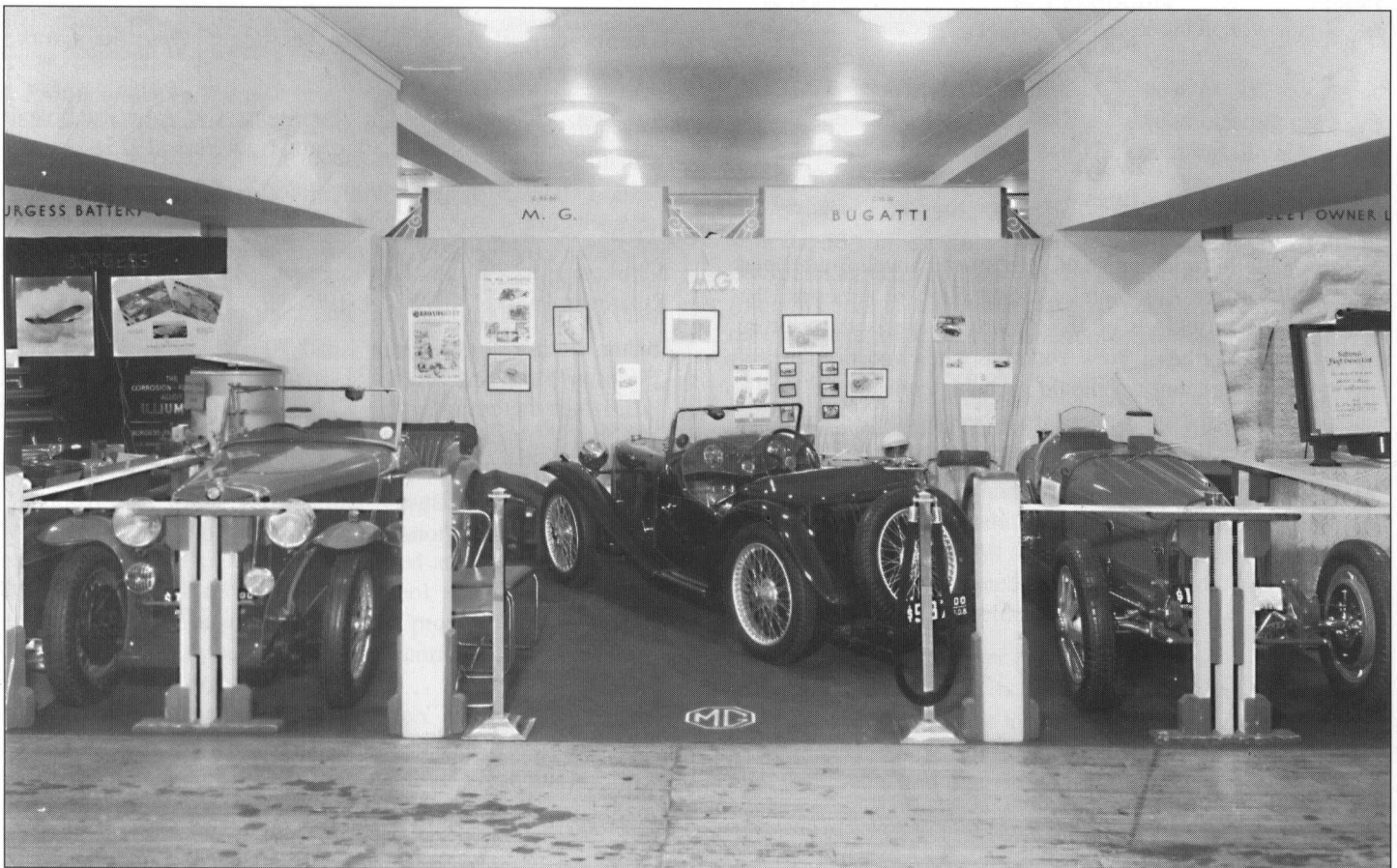
By the mid-thirties, other venues were being used by the ARCA. The Boston Region held races on the Alan Bemis property in Wayland, Massachusetts. One of the Wayland

Grands Prix was the subject of a full page photograph and mention in a *National Geographic* article. The author wrote: "New among Boston sports is midget motor car racing. She has a special Tom Thumb track, and oddly formed figure with seven turns. To it, on race days, tiny speed cars are hauled on trucks for rough and tumble contests."

Various club members used the influence of their families to encourage several communities to close some public roads for racing. Briarcliff, New York, allowed races to be held in 1934 and 1935 on a 3.3 mile section (30 laps) of roads. Alexandria Bay in the beautiful Thousand Islands section of upstate New York allowed races through the resort town's streets every summer from 1935 to 1940. These Round the Houses Races attracted thousand of spectators as well as national news coverages by magazines, newspapers, and movie newsreels.

From 1935 to 1940, the ARCA had an annual hillclimb up the Mt. Washington Auto Road in New Hampshire. The Memphis Grand Prix was run on four miles of unpaved public roads on the outskirts of that Tennessee city. On Long Island the ARCA participated in the Vanderbilt Cup Races of 1936 and 1937. This was a 3.3 mile course on public highways. Further out on the island, the summer resort town of Montauk Manor permitted 1.9 miles of public roads to be used in 1939.

The last race ever sponsored by the ARCA was the World's Fair Grand Prix in 1940. Held on the grounds of the New York World's Fair at Flushing Meadows, the club had an



1935: M.G. in good company at the new York Auto Show. The stand was sponsored by the M.G. Sales Company, the forerunner of Motor Sport, Inc.

hour and a quarter on a Sunday morning for the event. Since the fair was in its second year, officials hoped that the event would produce some paying patrons. A short .7 of a mile course through the International Area was laid out, and the race was to be 90 laps.

The surface was rough and the course challenging. Tom Dewart won the race in the Miles Collier PB Special. This was an exciting race which embodied all of the principles the ARCA stood for: speed, safety, fun. Not one entrant ever suffered a major injury, and no spectator was ever injured at an ARCA event, an enviable record for racing at any time.

On December 9, 1941, two days after Pearl Harbor and America's entry into World War II, president George Rand wrote each member declaring a suspension of all activities. The club was never reactivated.

The writer took all of the results of the ARCA races and used a scoring system of 4 points for a win, 3 points for a second place, 2 points for a third, and 1 for a fourth. The manufacturers' championship turns out this way:

Place	Manufacturer	Points
1.	M.G.	111
2.	Alfa Romeo	41
3.	Ford	38
4.	Austin	35
5.	Willys	32
6.	Bugatti	23

With this wide range of activity and a well established organization in the Automobile Racing Club of America, the credit for the birthplace of the American sports car culture belongs to the Northeast. New York was where most of the real activity took place, but we should probably consider St. Paul's School in Concord, New Hampshire, where budding enthusiasts were poring over British automobile magazines in the 1920s and wondering, "What if . . . ?"

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# The Emerging China Auto Market

*John A. Marino leads us through the Chinese automobile market of the past 15 years.*

## **The Emerging China**

Prior to the industrial revolution in the West, China was a world leader in science, crafts, and agriculture. Through most of the 20th century, the country suffered from famines, civil disruptions, war, and occupation by other countries. Mao Zedong came to power in 1949 and established an enduring communist dictatorship. Mao's communist government controlled all aspects of life. Dissent was not tolerated. The loss of life as the result of protest is numbered in the tens of millions. For many years, China turned inward and rejected technological and social advances.

Deng Xiaoping succeeded Mao in 1978 and initiated a policy of economic decentralization. This created a movement toward a market economy that has looked outward to the West and other parts of the world. The result of this movement has been a quadrupling of Gross Domestic Product (GDP) since 1978.

The political system is still communist and tightly controlled with a relaxing and tightening as deemed appropriate by the central planners. Attempts at reforms to address closing inefficient enterprises, modernizing the military, fighting corruption and creating jobs for the estimated 60-100 million unemployed are being phased in as resources and national interest permit.

## **A Profile of China Today**

China has 9.3 million square kilometers of land. The climate is diverse, tropical in the south and subarctic in the north. As of July 1999, China's population was estimated at 1.2 billion people, but it accounts for only 7% of the worldwide auto market. The population is growing at .75% per year which is projected to be sustained through 2050. The birth rate of 504 births per hour is twice the death rate. Emigration is less than .50%. There are 435 million men and 408 million women in the prime car buying ages. China has 696 million workers with 49% engaged in manufacturing. The Chinese government reports the average per capita GDP is \$3,600 per year, though this figure is subject to some scrutiny.

Of interest to those in the auto industry are some facts relating to the road network. China has 1.2 million miles of roadway. Only 271,300 miles are paved and less than 10% of this, only 24,474 miles, meet Western standards. Highway improvement is a national priority but progress is slow due to the lack of heavy equipment for construction and little automation in paving.

Given these facts as a backdrop, it is easy to see why the world's major automakers have turned an eye to China. With a growing population and quick entry into the technological era China has the potential for significant automotive growth in sales and profits.

## **The Chinese Auto Industry**

The automotive industry in China is subdivided into original equipment manufacturers (OEM) and suppliers. The

OEMs manufacture a variety of automotive products consisting of trucks, buses, and cars. Production figures for January through November 1998 indicate the following: out of 600,553 trucks manufactured, 588,684 were sold; out of 421,038 buses manufactured, 392,238 were sold; and out of 456,561 cars manufactured, 449,075 were sold. Growth has slowed due to changes in government policies relating to auto emissions, a scaling back of car purchases by government institutions, and the need to produce more heavy trucks for construction projects.

The car market is divided into four segments: a top class similar to the US luxury cars, a middle class consisting of VW Jetta and Buick Century-type cars, an ordinary class which are VW Golf-type cars, and a mini class, which consists of trikes and cars similar in size to a Geo Metro.

Through November 1998, auto production had increased by 2.42% for the year but sales had only increased by 1.53%. In comparison, 1997 production had increased by 7.37% over the previous year and sales had increased by 7.82%. The 1998 sales decrease was caused, not only by a slowdown in government purchases, but by the government stressing home ownership over vehicle ownership.

To reach the government targets of 8% economic growth, the China Construction Bank started offering car loans to the general public in late 1998. The era of installment buying had finally reached China.

Early in 1998, Shanghai-VW announced price cuts, with the 13 Chinese auto manufacturers entering into a price-discipline agreement. This type of market allocation and price fixing is illegal under the laws of the United States, but reminds one of China's communist approach to a market economy.

China is addressing its air pollution problem by banning leaded gas effective July 1, 2000. The biggest vehicle polluters are the millions of scooters and motor bikes in operation. In Shanghai, and several other of the largest cities, attempts are being made to replace these offenders with improved bus service. All vehicles produced after January 1, 1999 have to meet mandated emission standards similar to those in effect in the U.S. vehicle market.

## **Major Auto Manufacturers Producing in China**

Excluding truck and bus manufacturers, there are 13 major producers and their models that were produced in China through 1999, which I have listed below. (Fig. 1) You will find sales and production figures as Fig. 2. (See page 39.)

## **Automotive Demand and Production**

Prior to 1993, automotive production and sales were not accurately tracked. In 1993, total sales, including truck, buses and cars, were 1.4 million vehicles. This increased to 1.7 million vehicles in 1998. Through 1998, demand has nearly

Manufacturer	Model
Shanghai VW	VW Passat Santana Santana 2000
Tianjin Automotive Industry Corp.	Charade
FAW-VW	Jetta Jetta King Golf Audi 4, Audi 6
Dongfeng-Citroen Automobile Co., Ltd.	Citroen ZX
Changan Automotive Co., Ltd.	Suzuki Alto
FAW Group	Red Flag (Dodge Omni)
Beijing Automotive Industry Corp.	Jeep Cherokee (DaimlerChrysler)
Xi'an Qinchuan Development Corp.	Suzuki Alto
Jiangnan Automotive Industry Co.	Suzuki Alto
Automotive General Works of Guizhou	Minicar
Jilin Jiangbei Machinery Works	Suzuki Alto
Guangzhou Honda Automobile Co., Ltd.	Honda Accord
Shanghai GM	Buick

Fig. 1

matched production. The number of imported vehicles has dropped significantly during the same time period (Fig. 3).

The car market increased by 24% from 1992, when approximately 210,000 vehicles were produced. In 1997, approximately 470,000 cars were manufactured (Fig. 4). There is serious competition in the Chinese auto market where supply now exceeds demand. The taxi and private car sales now drive the market. This competitive environment has been characterized by price reductions as noted earlier.

Although not the focus of this article, a brief comment on the mini-vehicle market is in order. Sales of the Minicar, produced by Automotive General Works of Guizhou, have been increasing at a rate of 19% a year. In 1997, 340,000 Minicars were produced, up from 200,000 in 1994 (Fig. 5). Minicars appeal to the prospective buyer because of fuel taxes, affordability, and their use as taxis in middle-sized and small towns. However, this segment suffers from serious over representation in large cities, and price competition with small cars from Citroën, Suzuki, and Toyota.

As national policy has evolved and cars come into the mainstream in the developed areas, the private car market increased at a rate of 26% per year from 1985 through 1996. There were an estimated 680,000 privately-owned cars in 1996. Analysts estimate that 50% of the cars sold in 2000 will be bought by private citizens (Fig. 6). The Chinese auto market is emerging quickly. GM projects annual sales in China to reach 5,000,000 vehicles by 2005, and, to comprise the world's largest auto market by 2020. Factors driving the market are price, quality, service and technological advances. Fig. 2 includes data on production, sales, and percent of increase and decrease of all major car producers in China. Some conclusions may be drawn from this data:

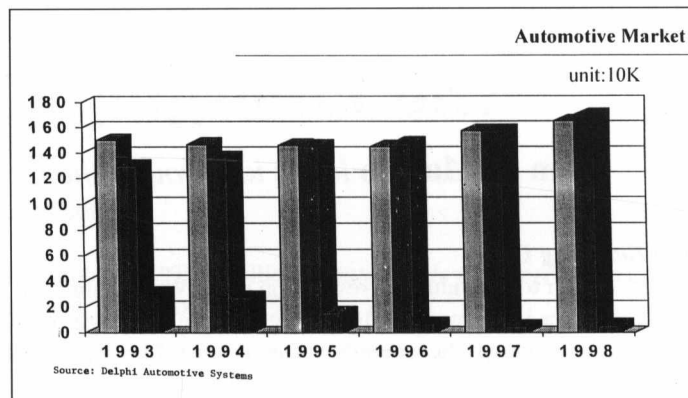


Fig. 3

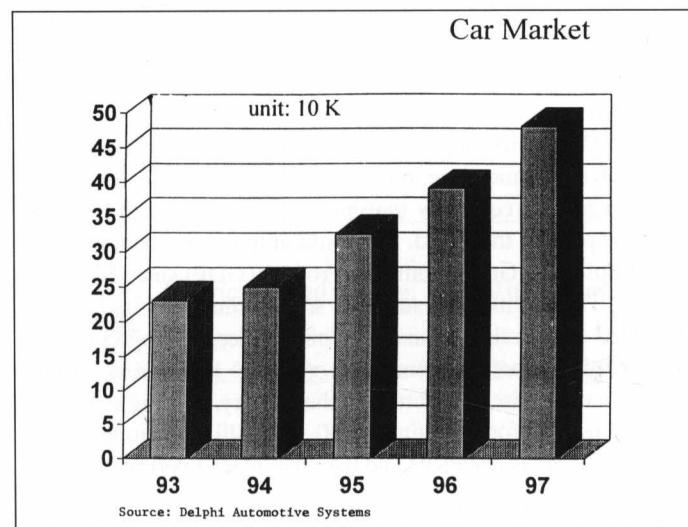


Fig. 4

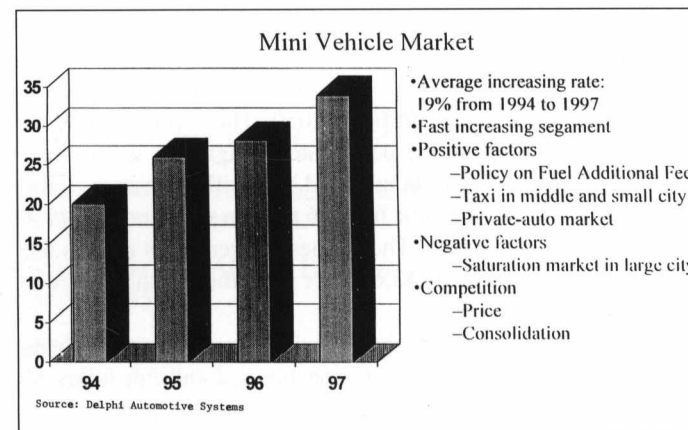


Fig. 5

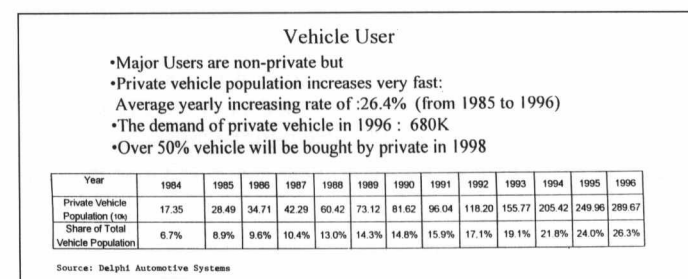


Fig. 6

- Through 1998 and most of 1999, vehicle production increased 24% but sales only grew by 23%. This is an overproduction of about 16,000 cars.
- Government purchases of cars have slowed.
- With GM entering the market, China now has potential excess production capacity of nearly 116,000 vehicles per year.
- At some point in the future, China will export complete cars or possibly sub-assemblies to car manufacturers in other parts of the world.

### Major OEM Locations in China

The accompanying map (Fig. 7) indicates the locations throughout China where OEMs have built production facilities. Suppliers are more diverse and can be found throughout the more industrialized cities. The majority of manufacturing facilities are located close to population centers with private individuals and government institutions that buy new cars. It should also be noted that the largest factories are close to ports that can facilitate both export and import of raw materials, components and sub assemblies.

### Shanghai, China's Emerging Detroit

Shanghai, China's largest city, has a population of more than eight million, plus five million more in the surrounding metropolitan area. The Shanghai government has designated what it calls the "six pillar industries": automobiles, steel, petrochemicals, telecommunications, home appliances, and power-generation equipment. The government has focused attention on the auto industry as a showcase and with the intent to develop a company to rival Japan's Toyota and Korea's Daewoo.

Among the several auto producers in Shanghai, the largest is Shanghai Automotive Industry Corporation (Shanghai Auto). The president of Shanghai Auto is Chen Xianglin. Shanghai Auto is a trade cooperative of over 50 automotive-related enterprises. In short, it is the city's automotive industry. The corporation had total sales through 1998 of nine billion U.S. dollars, with a profit of 900 million U.S. dollars. In 1985, it entered into a joint venture with Volkswagen AG to produce the VW Santana in Shanghai (Fig. 8). In 1998, the Santana accounted for 230,000 vehicles which is about 50% of total Chinese market auto sales, even though this car with '80s technology costs about \$25,000 after taxes. It dominates the market not because of product or service superiority but because of the number of regulations that have depressed competition. For example, the city of Shanghai requires that its taxi fleets buy Santanas.

Shanghai Auto has partnerships with numerous local and international automotive component suppliers. The most prominent of these operating in close proximity to Shanghai are ZF of Germany supplying transmissions, Bosch of Germany fuel system components, and Valeo of France lighting components. U.S. suppliers include Delphi Automotive Systems providing electrical distribution systems, electrical components, and batteries; and Eaton supplying steering components. Local content is now at 90%, reflecting the government desire that it become a fully-integrated automotive producer.

Shanghai Auto has adopted a long range philosophy focusing on future Chinese market needs. But it is also focusing on emerging export markets. The government will no longer

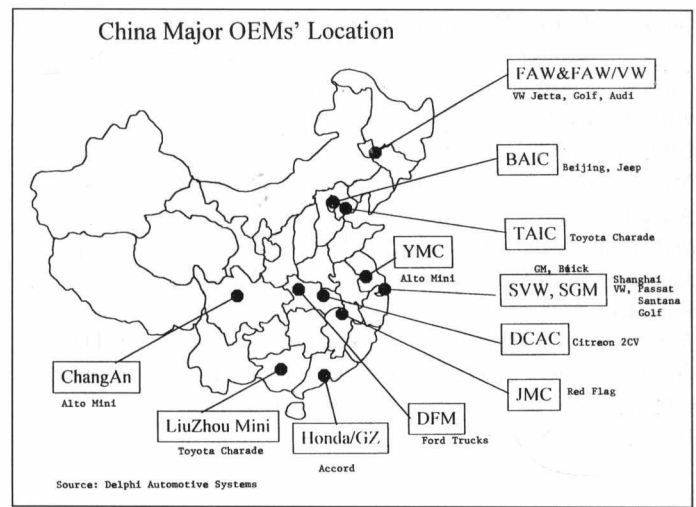


Fig. 7

accept outdated western designs like the 1980's Dodge Omni, Jeep, Audi and Jetta. All firms producing in China must be partners with Chinese nationals. Partners must be well-known automotive-component multinationals. These partners must have access to advance technology and abundant funds, and be globally competitive.

Shanghai Auto has 114 corporate dealerships, 113 franchised dealers, and 340 repair shops selling and servicing Santanas throughout China. In 1999, Shanghai Auto opened the first "quick oil change" station in the country. New to China also last year was the opening of the first rental car agency. Shanghai's largest banks are now offering installment purchasing on a limited basis. One method Shanghai Auto uses to distribute cars is by hiring drivers to deliver cars throughout China. In some instances this could mean the new car buyer takes delivery of an automobile with several thousand miles on the odometer. To address customer complaints and develop a distribution system that insures "zero" miles on new cars, Shanghai Auto has purchased special rail cars, ships and car haulers similar to those used in the developed nations.



Fig. 8 - One out of every two cars sold in China is a VW Santana

## General Motors' Operations in Shanghai

Adding to Shanghai's growth and leadership in the Chinese automotive industry is Shanghai Auto's partnership with General Motors Corporation. GM's relationship with China dates back to 1929. In October 1995, Shanghai General Motors Co., Ltd. entered into a 50% joint venture with Shanghai Auto to manufacture mid-sized vehicles, engines, transmissions and components. Total valuation was 1.2 billion U.S. dollars. On January 10, 1997, with Chinese Premier Li Peng and U.S. Vice President Al Gore as witnesses, the agreement with GM was formalized. In addition to a manufacturing facility, Shanghai GM has its own marketing unit and direct sales force. Shanghai GM uses the same customer care approach developed for the U.S. Saturn division.

Shanghai GM completed building its first plant in the Jingiao Export Processing Zone in Pudong in December, 1998. The first car was produced in April 1999, four months later, and 19,800 were sold during the remainder of the year, exceeding its target. The design capacity of the plant is 100,000 vehicles per year produced by 3,000 workers. It has been designed for future expansion, the integration of new technology, and the production of more advanced vehicles. Initial local content is 40% and GM plans to increase this to increase to 60% by 2001, with an ultimate goal of 80%. This first plant will differ from other Chinese plants in several respects. Employee teams will be encouraged to develop plant procedures, make decisions, and solve production problems. This is a significant departure from the authoritarian communist approach used in most Chinese manufacturing plants.

The sedan produced by Shanghai GM is the current U.S. Buick Century, designated the Buick GL which has been slightly modified for the Chinese market (Fig. 8). A Buick GLE minivan entered production in December 1999, a version of the US Venture/Montana/Silhouette trio. GM officials believe it will eventually account for more than 50% of sales. Oddly for a communist country, the Buick marque was chosen because the first emperor to own a car chose a Buick. The Buick GL features a 2.8 liter V6, automatic electronic transmission, and will be localized for export throughout Asia and Europe. The city of Shanghai, now with GM's involvement, is poised to become the future Detroit of the Far East.



Fig. 9 - The Chinese Buick GL.

As of March 2000, GM had 18 active automotive projects in 11 provinces of China employing over 10,000 people. In addition GM has established automotive technology institutes in Beijing and Shanghai. These institutes will teach mechanics, train the growing workforce, and explore technologies applicable to the growing automotive industry in China. GM has five parts distribution centers and 28 service centers throughout China to service GM products.

## Conclusion

China's developing automotive industry is indicative of a national resolve to join the industrialized world. It is apparent that the Chinese auto industry with its recent partnership with GM is on the fast track. China is a nation with wealth as diverse as its population, which makes for tremendous sales and profit opportunities. To take advantage of this opportunity, companies must be willing to cope with the bureaucratic communist government and take tremendous risks, yet have management that will take the initiative to move forward. China presents a dichotomy, communism for the people and modified capitalism for industry. This dichotomy is a detriment to firms who cannot take the risk and do not see the long view of China's emergence as a world power.

When President Richard Nixon made his first trip to China in 1972 offering a normalization of relations, one wonders if he knew that he would awaken a potential industrial and consumer goods giant. China is now dominating numerous categories of consumer goods in U.S. markets. At what point will China's auto industry have significant excess capacity and look to massive exports of cars to Europe, Asia, and the U.S.? If China continues to embrace technologically advanced products and can address serious internal infrastructure problems, the country has the potential to make the world's auto industry a very different market place.

## Postscript

*Professor Marino has been writing about a fast-moving target. Since the presentation of his paper in March 2000, hardly a week has gone by without a news story on the Chinese automobile industry. Here are some of the more significant developments between then and July 2000 when this issue went into production:*

- *Entry of China into the World Trade Organization now appears probable. One possible result is that China will move away from its planned economy and let the market determine whether new car plants are needed. China will not, however, allow majority foreign ownership (i.e. 51%) of a company.*
- *China has agreed to reduce tariffs on autos over six years to 25% of the landed price, from a current range of 80% to 100%. This has caused luxury car sales to drop as buyers defer plans while awaiting these reductions. GM's first-quarter sales for 2000 fell 30% from the fourth quarter of 1999.*
- *Tianjin Automobile Xiali Corp., which currently produces about 120,000 compact cars based on the Charade under a 1987 license from Daihatsu Motor Co. a Toyota group company. will enter a joint venture with Toyota to produce*

Echo (Yaris) compact cars beginning in 2002, with an eventual annual production of 120,000 vehicles.

- Buick's third model went into production in June 2000, the GS sedan, a version of the GL which has been designed to be owner driven.

### Acknowledgments

Automotive News  
 Central Intelligence Agency, World Factbook, 1999  
 China Business Daily  
 Delphi Automotive Systems, Inc.  
 Raymond Dolney  
 FAW-Volkswagen Automotive Co, LTD  
 Shanghai General Motors Co., LTD  
 Shanghai Today Magazine Co.  
 The New York Times  
 The Wall Street Journal  
 The Washington Post

### Production & Sales of Car Producers in Jan. - Nov. 1998

Producer	Production				Sales			
	Nov.	Jan.-Nov. 1998	Jan.-Nov. 1997	% Change	Nov.	Jan.-Nov. 1998	Jan.-Nov. 1997	% Change
Shanghai-Volkswagen	20,867	216,586	211,652	2.33	16,288	210,875	212,037	-0.55
Tianjin Automotive Industry (Group) Corp.	8,014	94,921	89,155	6.47	10,019	84,356	87,145	-3.20
FAW-Volkswagen	7,211	61,110	43,742	39.71	5,858	59,458	40,226	47.81
Dongfeng-Citroen Automobile Co., Ltd.	3,200	32,388	24,394	32.77	2,544	30,302	23,536	28.75
Changan Automotive Co., Ltd.	2,536	32,286	26,777	20.57	2,845	32,717	25,392	28.85
FAW (Group) Corp.	2,756	12,633	21,346	-40.82	1,801	13,968	17,767	-21.38
Beijing Automotive Industry (Group) Corp.	953	7,475	19,377	-61.42	577	8,236	17,987	-54.21
Xi'an Qinchuan Development (Group) Corp.	702	2,714	3,410	8.91	348	4,289	2,263	89.53
Guangzhou Automobile Co., Ltd.	0	2,246	1,534	46.41	0	2,567	1,685	52.34
Jiangnan Automotive Industry Co., Ltd.	0	863	988	-12.65	45	847	1,098	-22.86
Automotive General Works of Guizhou Space Industry Corp.	449	575	1,639	-53.81	59	1,039	1,030	0.87
Jilin Jiangbei Machinery Works	0	483	1,145	-57.82	0	383	1,970	-80.56
Guangzhou Honda Automobile Co., Ltd.	99	99	0	-	38	38	0	-
<b>Total</b>	<b>46,787</b>	<b>465,561</b>	<b>445,159</b>	<b>4.58</b>	<b>40,422</b>	<b>210,875</b>	<b>432,136</b>	<b>3.92</b>

Source: Delphi Automotive Systems

Fig. 2

# ABSTRACTS OF OTHER PAPERS PRESENTED

## Cause or Effect? Los Angeles Racing Venues

by Harold Osmer

There have been over 100 auto racing venues in the Greater Los Angeles area - more than in any other place in the world of equal area. Three primary factors have influenced the locations of racing venues: conscious design, dictates of land use, and random chance.

“Conscious design” refers to a venue developer selecting a beneficial site location and building a facility. Examples are: Santa Monica Road Race (1909-19) (Fig. 1, Fig. 2), Corona Road Race (1913-16), and Angeles Speedway (Beverly Hills, 1920-24).

“Dictates of land use” refers to venues being constructed on sites that held little or no value for other urban uses. This category also includes “land banking,” wherein a parcel of land is being held without permanent development until appreciation in value dictates. Examples are: Legion Ascot Speedway (1924-36), Carrell Speedway (1940-54), Ascot Park (1957-90), California Speedway (1997 to date) and Irwindale Speedway (1999 to date).

“Random chance” refers to a venue being built with little regard to location or other market factors. This includes facilities built by the land owner himself, as well as venues previously used for horse racing, dog racing, and airports. Examples: Gilmore Stadium (1934-50), Culver City Speedway (1932-34), and Santa Ana Airport (1950-59).



*Fig. 1 - Starting line of the Santa Monica Road Races, held 1909-19 on the city streets. With an 8.4 mile course, Santa Monica hosted the Vanderbilt Cup and American Grand Prize races in 1914 and 1916.*

Auto racing venues close for as many reasons as they open. By and large, it is a question of simple economics. For example, the typical lifespan of a board track in the 1920s was about four years. Fast and popular, the track surface began to deteriorate badly after four years and many track owners decided to sell rather than reinvest capital to rebuild the facility. The same is true of many small oval tracks. Even Ascot Park, which closed in 1990, would have required a tremendous facelift to keep abreast of the modern safety, comfort, and amenities that fans and racers now demand.

Effects of a racing venue on subsequent land values and uses are negligible. Once the grandstand is removed, there are little or no remaining traces of race activities. As a general rule, racing venues do not have underground storage tanks for fuel, etc., nor do they act as a dumping ground for broken parts. Post-racing land uses are primarily residential, followed by commercial and industrial.

The popularity of auto racing follows the prevailing economic and social trends of the day. The number of racing venues in Los Angeles peaked in the 1930s, again in the 1950s, and is currently on the upswing. Given the experience of track managers in both business as well as the sport of auto racing, I expect the newer venues to continue operating long into the 21st century.



*Fig. 2 - The 1914 Vanderbilt Cup race—Eddie Pullen loses a wheel soon after taking the lead, but rebuilds his racer and comes back to win the Grand Prize race just two days later.*



Harold Osmer adapted his paper from his graduate thesis on retired Los Angeles area auto racing venues and their effect on future land use/value. He is the author of *Where They Raced* (1996), *Where They Raced—Lap 2* (2000), *The Saugus Speedway Scrapbook* (2000), and the co-author of *Real Road Racing, The Santa Monica Road Races* (1998), which won the Southern California SAH Chapter's Valentine Award.

## **Auto Racing as a Means for Fund Raising and Development**

by Ken Berg

I'm proposing a philosophical shift to find ways to employ automotive history for the purpose of raising funds for research and development of safety, medical, and other technologies of benefit to the motoring public and the motorsports world. To this end, I founded in 1998 the Motorsports Education Foundation.

The artifacts of the automotive world are valuable in themselves. Standards for acquisition, cataloguing, preservation, interpretation and dissemination are needed to encourage the donation of valuable artifacts. Donors need to be assured that skilled archivist/historian/media/fund-raising people are employed to make something of the donated history and collections.

In my case, I have tape-recorded interviews with notable racing figures. They have lent me their albums and scrapbooks, allowing their materials to be scanned into our computers along with the results of my research. This creates a "track record" for the individuals involved which will provide a means of dissemination by way of a hardback book and through the resultant digitized files. We provide an interactive ongoing process allowing further materials to be added to the basic digitized "platform," facilitating the creation of on-going media for further dissemination. Thus, a self-generating process, aimed ultimately to recognize every individual from 100 years of

Ed.—In his talk, Mr. Osmer recounted how real estate developers and auto manufacturers were the prime supporters of, and funded, early races. He discussed the progression in Los Angeles from road racing (which included a spur from Santa Monica down Wilshire Boulevard, turning back to Santa Monica at San Vicente (close to us at the Petersen), to board tracks to small ovals. An example of the latter was Gilmore Stadium, located on Fairfax near the Petersen and the Farmer's Market.

American racing. Proceeds from my book and my files will be shared into R&D projects through the Foundation.

*Ken Berg is a management consultant with Diplomas from the Universities of Toronto, British Columbia, and Western Ontario. He has presented papers related to motorsports at other conferences. In addition to being the co-organizer of the Motorsports Education Foundation, among other things he is the Archivist-Historian for the U.S. 4th Armored Division Museum in Perle, Luxembourg. A member of the Society and a Canadian citizen, Mr. Berg resides in Calgary, Alberta, and Mesa, Arizona.*

Ed.—Harkening back to the earliest days of motor racing, Mr. Berg illustrated his talk with a photograph of the front page of an 1864 issue of the *Grand Rapids Daily Eagle* showing a cut of a Roper Steam Vehicle and an account of how it was beaten by a man on foot. The next year, the Roper was raced at a speed over 25 mph, covering a mile in 2:20. An 1881 issue of *The Machinist* depicted a steam machine purpose-built as a racer. Mr. Berg believes that "hot rods" have existed from the earliest days of the industry, with owners modifying their vehicles to get a little more speed.

## **The Rouge—Ford's Manufacturing Marvel: The Early Years, 1915-1928**

by Paul Maghielse

The Rouge is a marvelously unique example to use in focusing on the manufacturing side of the automobile business, from both the historical perspective as well as the numerous improvement and changes of philosophy implemented in the production systems over the life of the plant. I would like to approach the overall topic by dividing it chronologically into three phases examining the people and processes which dramatically affected the Ford Motor Company as well as the automobile business in general during the Rouge's long and fruitful life.

For the Conference, I will consider the early years, those from the beginning to the production of the Model A. There are several key issues that I will develop, beginning with the purchase of the land in 1915 and Henry Ford's fight with the Dodge Brothers. The help of Kahn and Mayo in designing and building "revolution" into the facility is also important. The dredging of the "turning basin" in the River Rouge and

contributions to World War I including the Eagle Boat contract for submarine chasers will also be discussed. The Rouge created a fully integrated (from raw material to finished parts) supply for the Model T. Time will also be devoted to the Fordson tractor, and Charlie Sorensen. I will end with a discussion of the rivalry between the Highland Park and Rouge plants.

*Paul Maghielse is the Director of Continuous Improvement for Omega Stamping, a supplier of stampings and sub-assemblies to the automotive industry since 1961. He has lived in Detroit for most of his life, except for a stint at Purdue University, followed by "school and a four-year ride deal" aboard a US Fast Attack nuclear submarine. He has written about the automotive industry and its related stocks for an on-line investment site. Several years ago he penned a book-length series on car buying using the internet. He is a member of the Society.*

# Indiana: What Might Have Been?

by Dennis Horvath

We will take a look at how Indiana serves as a model for our automotive industry and heritage. Indiana has a rich past and present in auto manufacturing and in the automotive components electronics and parts industries. We will discuss what contributed to Indiana's growth as a major automobile manufacturer in the first part of the 20th century. Other points included are descriptions of key innovators, their contemporaries in other states, factors contributing to the decline of Indiana's automotive manufacturing, similarities with Michigan, Ohio, and Missouri, and where Indiana's industry stands today. I will also provide information on how Indiana is sharing its automotive heritage today.

Indiana once vied for Michigan's title as the automotive titan of the United States. It was at a time when the names of automobiles like Duesenberg, Stutz, and Cord brought worldwide acclaim to the Hoosier state. Indiana's contributions to automotive history have been numerous. Tilt steering, cruise control, and hydraulic brakes are just three examples of the innovation created by Indiana automotive pioneers. Yet the

innovators themselves have become nearly forgotten—overlooked as we take their inventions increasingly for granted as part of the standard equipment on today's models.

Today, Indiana's automotive heritage is more than just memories — it is honored in the museums, historical markers, and events along Indiana's highways. Other milestones are recorded in the annals of more than 40 Indiana communities that have either had automobiles manufactured or assembled within their borders. More than 200 automobiles, trucks, and cyclecars can claim Indiana production or assemblage.

I hope to place Indiana's role in proper context to the nation's automotive heritage.

*Dennis Horvath lives in Indianapolis, once home to over 52 auto manufacturers. His particular interest in Indiana automotive pioneers and automobiles led to a book, co-authored with his wife, Cruise IN: A General Guide to Indiana's Automotive Past and Present. He is a member of the SAH.*

## The Dixie Highway: A Return to Yesterday

by Kevin Clemens

In the late 'Teens through the '20s, the nation fully embraced the concept of the automobile and the marvelous opportunities for mobility it provided. During this time, ambitious road projects sprang up in every part of the country as a part of the Good Roads Movement. Unlike the Interstates and expressways of today, these routes went from town to town as they connected bigger cities together. Ultimately, some of these routes became major arteries for east-west and north-south travel. One of these was the Dixie Highway.

Covering more than 2,500 miles and stretching from Sault Ste. Marie, Michigan, to Miami, Florida, the Dixie Highway was the primary conduit for travel from the industrial Midwest to Florida's sunshine coasts. The Highway was started in 1915 and largely completed by 1928. Motorists actually had several choices of routes as the Highway branched and looped to hit all the major cities on the north-to-south corridor.

Today much of the route of the Dixie Highway is served by Interstates, such as I-75. But, it was a dramatically different trip that one would make in the early to mid-20s. Instead of rushing along on limited-access freeways hermetically sealed in a climate-controlled car, minivan, or sport utility vehicle of the '90s, motorists of the '20s were much more involved with their environment and the people they would meet along the route. Travel was more leisurely and friendlier as small towns were a part of the adventure, rather than abstract names on a highway exit sign.

If the travel was involving, so too did the construction of the Dixie Highway pose challenges. According to the 1921 Automobile Green Book (a travel guide from the period), "Perhaps the greatest [construction challenge] is the highway being built across the Everglades, between Marco and Miami. When one sees the problems the construction men are here meeting, and solving, in order to build a hard surface road across a section literally one vast bottomless swamp, he begins to realize that this bit of engineering work ranks worthily with that wonder of the age, the building of the Panama Canal." Upon the completion of I-75 in 1968, the importance of the Dixie Highway subsided and it became largely a low-traffic rural highway or access road.

Does the Dixie Highway still exist? A preliminary survey indicates parts of it still do. In places like Detroit, Toledo, rural Ohio, and Lexington, Kentucky, there are still sections of roadway that follow the original route and that are called the Dixie Highway. In many places, major roads and Interstates have bypassed the original route, leaving it as a lightly-used secondary or country road.

*Kevin F. Clemens has been the Technical Editor of Automobile Magazine for eight years. Before that, he spent 12 years at Michelin as a research and design engineer for performance and racing tires. He likes to race vintage sports cars, including a 1930 Ford Model A sprint car. Mr. Clemens is a member of the Society.*

# The Automobile, Dominant Symbol of the 20th Century

by Thomas L. Brownell

Though the 20th century may be remembered by social historians for its political symbols, the automobile proved to be the century's most permanent, pervasive, interpretively diverse, and dominant symbol. I begin with Henry Adams, the 19th century historian, peering into the forces that would dominate the 20th century as he toured the Gallery of Machines at the Paris Exposition of 1900. Reflecting on the new machines' potential to transform society, Adams wrote "the nearest approach to the revolution of 1900 was that of 310, when Constantine set up the Cross (The Education of Henry Adams). Of all the new machines, the automobile (which Adams described as "a nightmare at a hundred kilometers an hour") would transform and dominate the 20th century.

As a transforming force, the automobile would be seen as a symbol of power (raw power as expressed in racing, political power as in the Third Reich's massive Grosser Mercedes parade cars, and economic power as in an elegant Duesenberg or merely Detroit's latest model).

The automobile also became symbolic of freedom, as expressed in the open road. Automobiles could also express or cloak identity, and for young men, access to an automobile became the 20th century's rite of passage.

Examples of the automobile's diverse symbolic expressions can be found in literature and film, as well as art and advertising. By mid-20th century, the automobile had become so enmeshed with youth that the youth culture film "Rebel Without a Cause" portrays the automobile as a clubhouse, a test of courage, proof of manhood, gateway to freedom and self-discovery, and means of escape.

The automobile has endured as a symbol by its ability to capture and hold people's imagination. For the 21st century, the automobile's symbolic expressions will surely change. Will it remain the new century's dominant symbol?

*Thomas L. Brownell is Professor, Automotive and Heavy Equipment Management Program, Ferris State University, Big Rapids, Michigan, where he teaches a course on "The Culture of the Automobile." To car enthusiasts, he is best known for the "Questions & Answers" column he has written for the past 16 years for Old Cars Weekly. He is also the author of How to Restore Your Collector Car, and serves as editor-at-large for This Old Truck magazine. At the first auto history conference he spoke on "The Arsenal of Democracy: America's Auto Industry at War," Abstract, Review No. 32, p. 53. He is a member of the Society of Automotive Historians and has taught in Romania.*

## American Cars: Sub-culture in Finland

by Arto Elomaa and Vappu Ikonen

### 1. Introduction: Finns—Car Crazy

To describe in a few words the reasons why a country with no notable car manufacturing and horrible car taxes is so car crazy. Finns excel in motorsports. In 1998 Finnish drivers took both FIA Formula 1 and World Rally Championships, and in 1999 led the pack again. Finnish drivers have won 10 out of 20 World Rally Championships, and the slogan in WRC teams goes, "If you want to win, take a Finn."

2a. How cruising and American cars were invented by youngsters in a country with the average temperature of a refrigerator.

American cars emerged as a sub-culture against leftist student movements in the 1970s. For years, the largest number of cars sold in Finland came from the Soviet Union, which made it easy to show off with even the most humble Rambler.

2b. The evolution of a sub-culture.

A postcard addressed only to "the best magazine in the world" was delivered to the Finnish magazine *V8*. The role of taxation on the import of old cars. Sub-culture theme in environmental issues: newer imported cars used unleaded gas and had catalytic converters. The leaders of the green-leftist movement were driving Ladas that yielded much higher emissions.

2c. The current state of cruising.

The average age of rodders has risen due to the fact that society today allows well-behaved grownups to have peculiar hobbies. Also, the influx of younger people has slightly decreased due to economic crises in the early 1990s and the decreasing status of a sub-culture. The largest indoor show in Finland is the American Car Show.

3. Cars are good for the kids and therefore for society.

It is said that the car hobby is good for kids since it keeps them off the streets. Our current society doesn't have many alternatives for a kid who isn't interested in traditional sports but doesn't want to bury himself/herself in the internet either. For many younger males, the car hobby is the first thing that extends their perspective from next weekend to next year. The economic impact of the hobby, while not negligible, could be much bigger as in Sweden or the UK.

*Arto Elomaa and Vappu Ikonen live in Helsinki, and are social scientists, in economics and economic history. Mr. Elomaa has written racing reports and for the Finnish Ford Mustang Owner's club magazine Corral. Ms. Ikonen has written about cultural history and automotive museum presentations. They have also written "less interesting stuff about interest rates, monetary policy and such," noting that "one has to make a living also."*

## Auto-phobia in American Literature: the Challenge for Motorsports

by Patricia Lee Yongue, Ph.D.

Believing in the applicability of the Racer's Edge model to all areas of human and societal performance and achievement, the Motorsports Education Foundation has defined a need to integrate motorsports into academic curricula and professorial research. These have been historically ignored save in those regions economically tied to the auto and/or racing industries.

Current scholarly attention to cultural studies may provide an inroad, but motorsports will first have to surmount an almost institutionalized demonization of the automobile as artifact, icon, and agency of dehumanization and death. Vehicular racing is conceptually, habitually vilified via images of American "conspicuous consumption," anti-intellectualism, aberrant sexual desire, and a desire to beat the clock, ironically to beat death.

Insofar as humanities programs tend to be the core of traditional academia and English departments the traditional core of the humanities, the study of American literature produces some insights into this situation. From the perspective of canonical American literature, but also in terms of how such literature has historically been perceived and taught by scholars, the automobile, like Captain Ahab's Moby Dick, has become evil "visibly personified" and "made practically assailable."

It is the demon Other of human beings, in the modern American puritan psyche linked with sexual desire and unholy powerfulness—as it is paradigmatically in Fitzgerald's The Great Gatsby. However, because it has become so indispensable a part of every American's life, the automobile has more complexly and more anomalously than the airplane been associated with the human relationship with technology. It is an Other, a dangerously beloved (usually female or feminized, as in Gatsby) reckoned immediately productive but ultimately destructive. Its history in American literature cites its origins in ancient myth, in both the fleet Pegasus and the death-dealing Trojan Horse, and in the bronco and the powerful steam locomotive that assisted the quicker realization of American manifest destiny.

The cynosure of the demonization of technology in American culture that is symbolized in the automobile occurred

in literary modernism, first in the mis-response of both mid-20th century writers, intellectuals, and critics, to Henry Adams' conceptualization of the "dynamo" in The Education of Henry Adams through a final sour response to middle-class America's enthusiastic embracing of the automobile in the 1950s. Symbol as well of what Fitzgerald dramatizes in Gatsby as America's consuming and exhausting race against time for money enough to buy eternal youth, the automobile in traditional mainstream American culture epitomizes the title/thesis of critic Leo Marx's influential analysis, The Machine in the Garden.

*Patricia Lee Yongue is the Director of Upper Division Studies and Associate Professor of English at the University of Houston, Texas, where she tried, in vain, to have the University establish a motorsports program. She was a drag racer in the early '60s, and is now part owner of a Mustang Boss 351. Dr. Yongue received her B.A. and M.A. from the University of San Francisco, and her Ph. D. from UCLA.*

Ed.—The discussion following Professor Yongue's talk focused on the use of automobiles of some noted American authors. Gatsby's splendid Rolls-Royce is accompanied by a "yellow bug of a station wagon," which Dr. Yongue noted was relegated to carrying the servants in Gatsby's funeral procession. Dr. Yongue also noted that Fitzgerald had named one of his characters, Jordan Baker, after two cars of the day. Kit Foster noted Fitzgerald's scathing remarks in his letters about his Marmon. Mention was made of Main Street where Sinclair Lewis places a colorless doctor in a colorless brown car. Willa Cather didn't own a car and didn't even want to ride in one, as compared with Edith Wharton who loved her Packard, and Gertrude Stein, her Ford Model T. In Cather's One of Ours, the heroine, Enid, drives a black electric coupé.

Concluding with Ernest Hemingway, it was noted that the author owned at least one Buick and used a Buick in Across the River and Into the Trees. In his last-published work, The Garden of Eden (1986), he mentions both a Bugatti and an Isotta-Fraschini.

# To Spread its Wings: The Animation of the Automobile, 1896-1903

by Nancy Koppelman, Ph.D.

Contemporary manufacturers frequently use animated images to describe automobiles. Dependence on muscle power for rapid individual mobility has virtually been eliminated, yet advertisers appear to believe that the appeal of autos is limited to our sense that they are alive. The rhetorical introduction of a living, intelligent, motive principle into automobiles is historically traceable. I describe how and when it happened, and offer an explanation of why turn-of-the century auto advocates animated automobiles.

The first auto owners, discouraged by urban traffic, took their cars to the country. As a result, new conflicts arose around the use of country roads, and existing class conflicts were exacerbated. In turn, writers in the popular press, some of whom had a vested interest in the success of the auto industry, pitted the automobile against the horse in an effort to shape public roads into spaces that primarily served automobiles (Fig. 1). In doing so, however, they appealed to a notion of individual mobility that relied on qualities that belonged to horses. In their arguments *against* horses, advocates supplemented utilitarian

descriptions of autos with animated images. Eventually, defenders of the early auto even anthropomorphized the automobile. They promoted the idea that autos had "rights," and that their potentials and capabilities ought to be protected and developed comparably to those of other players in American democratic life. Animation and anthropomorphism persist today, perpetuated by the industry through the images in and rhetoric of advertising.

*Nancy Koppelman is a member of the faculty in American Studies at The Evergreen State College of Olympia, Washington. She began research on the cultural significance of the automobile during her college years. She received her M.A. from the University of Washington, and her Ph.D. from Emory University. Her dissertation on the history of individual "mobility" in the United States (both physical and socio-economic "mobility") will be published soon by the Temple University Press.*

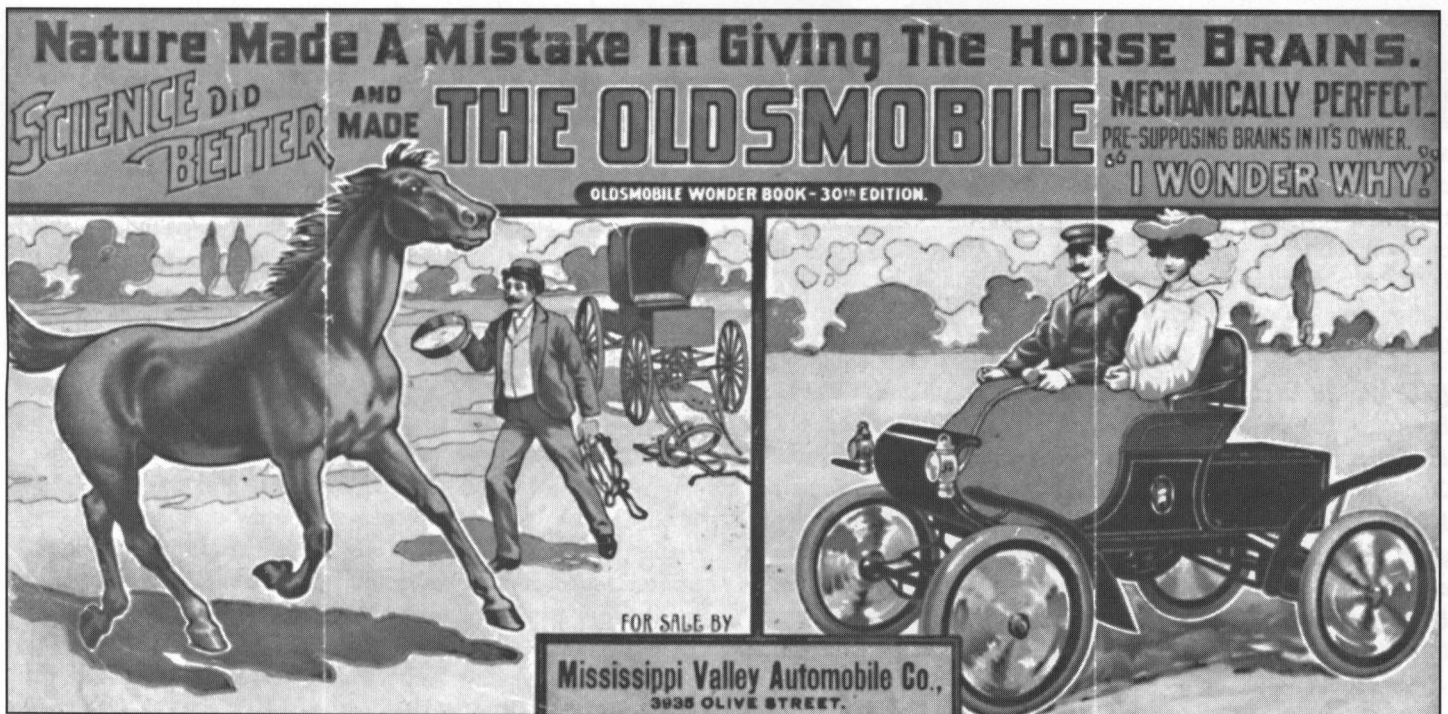


Fig. 1 - The automobile "pitted against" horses in the popular press.

# Anxiously Popular: Women and the Automobile Culture of the Early 20th Century

by Deborah Clarke

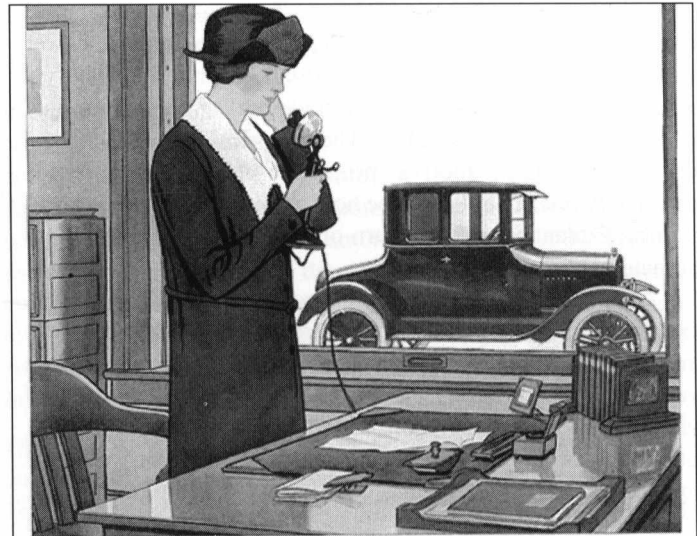
This presentation uses two main sources from the popular press to investigate assumptions about women's relation to the automotive culture: girls' books and advertisements.

I contend that much of the anxiety which many Americans felt over the growing lure of the automobile (and, in broader terms, the age of technology) is displaced onto women drivers. This anxiety appears to be initiated in large part by class concerns; as long as the car remains a toy of the rich, no one is overly concerned over its revolutionary potential. Thus, girl's books such as the series novels *The Motor Maids*, *The Automobile Girls*, and *The Motor Girls* present wealthy, independent young ladies, whose motoring skills are viewed with pride and respect. The car simply reinforces their class position. These series, however, all began prior to the assembly line and subsequent availability of the car to a far wider range of people.

By the '20s, while advertising specifically targeted women, it did so with an interesting inconsistency. Ads by various auto companies reveal a fascinating mix of appealing to women's independence, yet also marketing the car as yet another domestic machine—like the sewing machine or vacuum cleaner. (Fig. 1) In this way, the auto manufacturers try to reassure the public that women behind the wheel do not really represent a significant shift in power dynamics. Cars, as an early Ford pamphlet asserted, allow women to be “even more the woman.”

Other cultural texts, however, disputed this claim, and I am using analyses of these girls' books and advertisements to explore the cultural impact of the automobile on assumptions about gender in 20th century America. To what extent does the car simultaneously reinforce and re-imagine gender stereotypes? How is this anxiety played out in popular culture? I will end with a brief description of Fitzgerald's *The Great Gatsby*, a book both popular and literary, where class and gender play leading roles in reflecting conflicting ideas about the power of the age of automobility.

*Deborah Clarke is Associate Professor of English and Women's Studies at Penn State University. She will be teaching a Freshman Seminar next Fall on “Gender and Automobility in 20th Century America.” She has written a book on William Faulkner, and is now at work on Women on Wheels: Literary and Cultural Automobility in 20th Century America, a portion of it forming her talk at the second conference, “Driving Into the Past: Women Writers and the Paradox of Automobility” (Review No. 34, p. 41). Professor Clarke is a member of the Society.*



Her habit of measuring time in terms of dollars gives the woman in business keen insight into the true value of a Ford closed car for her personal use. This car enables her to conserve minutes, to expedite her affairs, to widen the scope of her activities. Its low

first cost, long life and inexpensive operation and upkeep convince her that it is a sound investment value. And it is such a pleasant car to drive that it transforms the business call which might be an interruption into an enjoyable episode of her busy day.

TUDOR SEDAN, \$590      FORDOR SEDAN, \$685      COUPE, \$515      (All prices f. o. b. Detroit)



Fig. 1 - The businesswoman, as seen by Ford in 1924.

# Cultures of Automotive Technology: Competing Visions of the Electric Vehicle, 1965-2000.

by David A. Kirsch

In the early days of the industry, the electric vehicle (EV) was viewed as a female artifact. But since 1965, it has become a masculine one. I am presenting the results of research conducted via an experimental website designed to collect information about current users of EVs.

Specifically, owners and drivers of EVs were invited to visit the website—(sloan.stanford.edu/EVonline)—to share their experiences and participate in an online survey about themselves, their cars, and their communities. The overall aim of this study was to identify and interact with this community of drivers, to provide a repository for their operating knowledge and experience, and to establish baseline data about their vehicles and mobility patterns, all in advance of expected changes in the availability of new transportation technologies for the consumer mass market.

Set against the backdrop of the 30-year effort to reintroduce the EV to the mainstream automotive marketplace, the study suggests the emergence of two distinct cultures of technology, embodied in different norms and assumptions about the value and success of the EV. On the one hand, secondary literature, Congressional hearings and other pieces of the public record readily illuminate the view of the established automobile manufacturers. For these large companies, the EV was filled with technical promise, but always hobbled by its dependence upon traditional and presumptively inadequate battery technology. The EV was always “the car of tomorrow,” but never saw the car of today. Meanwhile, where the established manufacturers saw failure, the actual owners and drivers of EVs have found success, virtue, and profound satisfaction.

I conclude with the remarkable paradox of the General Motors EV1. In this instance, the two cultures produce widely differing views of the same technology. Within the manufacturing culture, EV1 has been, at best, a disappointment and, at worst, an abject failure. But the EV online survey data show that EV1 drivers believe the car is a great success, with at least one lessee claiming that General Motors will have to “DRAG ME OUT KICKING & SCREAMING” when the lease is up.

*David A. Kirsch is a Visiting Assistant Professor and ATT&T Faculty Fellow in Industrial Ecology at the Anderson Graduate School of Management at UCLA. He is the author of*

*The Electric Car and the Burden of History, a look at the history of the electric car and an analysis of why gasoline-powered automobiles became the dominant technology, published by the Rutgers University Press in August 2000.*



*The electric Comuta-Car of the 1970s, manufactured by Commuter Vehicles, Inc., Sebring, Florida*

Ed.—Mr. Kirsch explained that the survey elicited responses from 130 persons, 80 of whom had at least a B.A. degree. The EV was the only car of 35 to 40 percent of the respondents. The EV population consisted of conversions (VW Rabbit, Porsche 914, Ford Escort) and purpose-built (GM EV1, Sebring Vanguard Citicar, Solectria, Commuta-Car). Twenty-two percent of the respondents drove their EVs 5-10,000 miles per year, and nine percent, 10-20,000 miles per year.

The talk was set against the backdrop, earlier in the week, of the safety recall of the EV1 with no set repair date, which Mr. Kirsch viewed as its death blow. Instead of seeing the car through the eye of the culture they expanded, GM management is killing the good will created in users of the EV1. However, he noted, the mainstream automobile manufacturers are moving away from the EV to the hybrid.

There was an EV at the conference, a Nissan Altra driven by Dean Case, who charged it every day at one of the two stations in the Petersen parking garage. Mr. Case explained its technology and gave rides to interested persons.

# Woodies, Workhorses, and the WonderBread Generation: The Rise and Fall of the Station Wagon and the Emergence of the Minivan

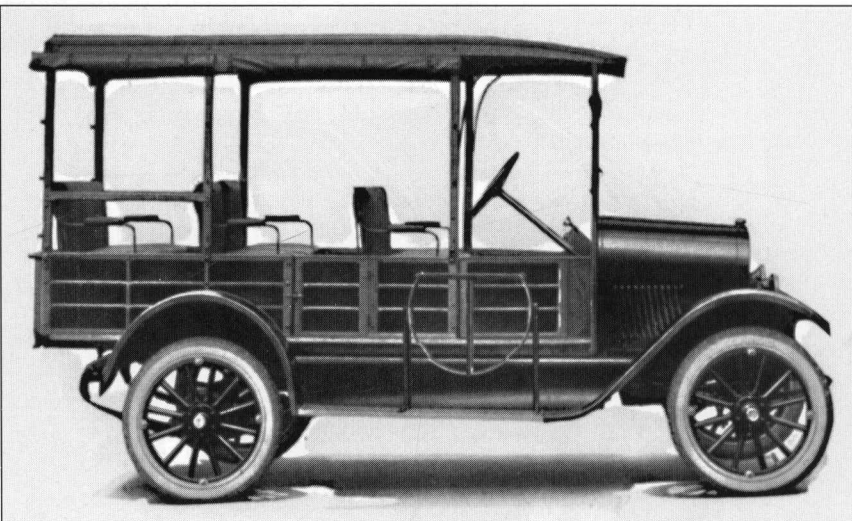
by Thomas A. Adamich

In 1923, the Star Motor Company introduced a new concept in passenger car transportation, a vehicle containing an elongated cargo area (an extension of the passenger compartment) in lieu of an enclosed, structured “trunk.” This hybrid car/truck maintained the wood frame construction that had been commonplace since the development of the closed

automobile in the early 20th century, before the onslaught of World War I. Conveniently designed as a transporter of additional passengers and ancillary materials (e.g., luggage), the new model was later nicknamed the “woody” due to its wooden structure and the use of genuine wood body panels aft of the firewall. The revolutionary concept eventually became known as the “station wagon.”

Numerous factors contributed to the rise of the station wagon’s popularity—the suburbanization of America after World War II, increasing affluence of the middle class, and emphasis on family leisure time/availability of discretionary income. And to its fall as well. The meteoric increase in the popularity of another “product of Yankee ingenuity”—the minivan—forms a benchmark for commentary. This will illustrate the marked change in how Americans feel about their vehicles—the emotional connection associated with the automobile as a contributor to personal growth and a symbol of social status.

*Thomas A. Adamich is the District Librarian, Indian Valley School District, Ohio, and President of the Visiting Librarian Service. He lives in New Philadelphia, Ohio, and is a member of the Society.*



*1923 Star factory catalogue showing what is generally considered to be the first production station wagon.*

## The Ford Employee Suggestion Program

by Brian McMahon

In 1947, Ford Motor Company workers were invited to “give out original ideas for improving Ford’s manufacturing and management methods.” By 1953, the company had distributed well over a million dollars in awards to workers for their suggestions, and more than 100 workers had received the maximum prize of \$1,500. In 1978, 94 percent of the 4,700 employees at the Chicago stamping plant submitted suggestions. More than 1,000 workers at that one plant received over \$380,000 in cash, US Savings Bonds, and new cash awards for their ideas.

Modifications introduced as a result of workers’ suggestions did have a substantial impact on many aspects of the design and manufacture of automobiles. The suggestion program also had important ramifications on labor management relations. The response of the UAW was generally negative, based on fears that some of the suggestions would ultimately cost workers their jobs. At the Twin Cities Assembly Plant in St. Paul, Minnesota, for instance, there appears to be reason these fears were warranted, according to contemporary accounts. Because the overall state of labor management relations at that time was strained, the Union felt that this program was just another management tool created to divide the workforce. From

the Company’s perspective, it could be argued that the success of the program served as the foundation for greater labor management cooperative efforts, culminating with the widely heralded Employee Involvement program of the 1980s.

Mr. McMahon explored the overall impact of the suggestion program, showing how the Company’s attitudes changed over the years. Founder Henry Ford was initially opposed to soliciting ideas from the workers, but by the 1990’s the Company had progressed to the point where the Explorer Design Team was collaborating with the Detroit Free Press and CompuServe On-line Services using “the Internet as a literal net for catching its customers’ voices.”

*Brian McMahon graduated from Pratt Institute School of Architecture in his native New York City, and studied historic architecture at Columbia University. He has worked on a variety of urban planning and redevelopment projects “dealing with the consequences of the automobile.” Currently a consultant to the Minnesota Labor Interpretive Center in St. Paul, Mr. McMahon is completing a book on automobile manufacturing in Minnesota which details the history of the Ford Motor Company in that state from its 1912 origins.*



# Book Review

*Arte y Estilo: The Lowriding Tradition*, Denise Sandoval and Patrick A. Polk, with a contribution by Dick DeLoach, softback, 11 x 8-1/2 in., 64 pp., color photographs, Petersen Automotive Museum, 2000, available from Petersen Automotive Museum, 6060 Wilshire Boulevard, Los Angeles, CA. 90036 (\$16.95); *Lowrider* magazine, May 2000, 206 pp., published monthly by McMullan Argus Publishing, 2400 Katella Ave., Anaheim, CA 92806, \$4.25 a copy.

The Third Automotive History Conference at the Petersen Automotive Museum occurred at the same time as "Arte y Estilo: The Lowriding Tradition." The exhibit, which ended in May, featured examples of the modified and highly decorated passenger cars and light trucks of the Mexican American community of Southern California. The catalog is the first ever to accompany a Petersen exhibit and exemplifies the Museum's mission "to explore and present the history of the automobile and its impact on American life and culture, using Los Angeles as a prime example."

The recognition of the automobile as an art object goes back to 1951 and the exhibit at the Museum of Modern Art's (MOMA) "8 Automobiles" in New York City. At the time MOMA was founded in the late 1920s, the age of industrial design had begun and it was of particular relevance to the mission of MOMA to promote the art and architecture of the day. The 1951 exhibit was the logical outgrowth of MOMA's interest in the applied arts of industrial design. Appearing to need a justification for the exhibit nonetheless, Arthur Drexler, Curator of Architecture, began his essay in the exhibition catalog with the proclamation that "Automobiles are hollow, rolling sculpture." The vehicles on display "were chosen primarily for their excellence as works of art" and included a 1937 Cord and a 1949 Cisitalia. Drexler wrote that the Cord was comprised of "voluminous fenders" and a "vigorously box-like body" in which "each part is treated as an independent piece of sculpture." In the more modern Cisitalia, Drexler concluded that its body "is slipped over its chassis like a dust

jacket over a book." For a leading tastemaker of the day to describe automobiles in terms reserved until then for works of Michaelangelo and Brancusi was nothing short of revolutionary. It was a new way of looking at the automobile.

Now, half a century on, another museum has given us a new way of looking at the automobile. The Petersen, on the opposite coast, has mounted a display of vehicles whose primary purpose is not transportation, the lowrider. Lowrider refers "to any automobile, van, pickup truck, motorcycle, or bicycle lowered to within a few inches of the road." As the catalog explains, they are "customized vehicles with heavy-duty hydraulic suspension systems, costly lacquer jobs, stylized murals, etched-glass logos, plush interiors, and a proliferation of luxury extras." The catalog terms them "the most notable contemporary American example of decorated automobiles," and observes, as a latter-day Drexler might, that "Like a second skin tattooed with murals, lacquer, and high-gloss finish, a custom lowrider presents an individual's dreams, aspirations and identity to the world. . . . What more could one ask of a car?"

Lowriders place an emphasis on style. Decorative features such as metal flake paint, murals, overstuffed cloth interiors, wire wheels, and skinny tires have become important aspects of display and competition. We are told that some of the cleanest show cars have never even seen the boulevard. Murals featuring Aztec warriors, voluptuous women, or religious icons are splashed across their hoods, flanks, trunks, and undercarriages. As a whole, the murals, paint, upholstery, and body modifications "come together as a unique form of self-expression, a rolling artwork." (Dick DeLoach, *Lowrider* magazine). One could observe, then, that in 50 years the auto as a museum object has gone from Hispano to Hispanic. This reflects the demographic shift from East to West, and a national culture that is less elite and more diverse.

The lowrider stands in stark contrast to the "8 Automobiles." The earlier vehicles were displayed as they were manufactured, unmodified. Most of

them were not produced in great numbers. On the other hand, 13 of the 16 lowriders selected for the catalog began life as standard plebian mass-produced Chevrolet cars or trucks, of no original design merit (the other three were Lincoln, Cadillac, and Ford Thunderbird). The catalogued vehicles rolled out of their plants from the 1930s to the 1970s. Years later, they have been lowered and decorated, converted to highly individualistic vehicles, but with strictly American antecedents. In terms of mechanical modifications, the lowrider has its inspiration in the California hot rods and customs of the 1930s-50s. In terms of ornamentation, they are descendants of the psychedelically painted VW buses of the '60s and the custom-painted van conversions of the '70s. In sum, they represent aspects of automobile culture that either didn't exist or were little known at the time of "8 Automobiles."

Some reflect our popular culture as well. Take "The Las Vegas car." This 1979 Continental Mark V has no exterior surface area untouched by the brush. The paint features a base of butterscotch with a mix of gold, blue, purple and lavender. The airbrushed murals of the Vegas Strip are complete with hotels, casinos, and showgirls. The interior has been redone to resemble a casino with craps in the fold-down driver's door, roulette by the driver's seat, keno by the passenger door, and blackjack on the dashboard. Or the Star Car, a 1973 Thunderbird. The star in question is Michael Jackson, and there are over 150 images of him and his family on the car, highlighted by a white base coat and a multicolor spray of yellow, black, fuschia, lipstick red, cobalt blue and orange tints. Whatever sculptural aspects the original vehicles may have had exist no more. One could term the resulting vehicles "hollow rolling canvases." In fact, the catalogue terms them "Picassos of the boulevard." Whether those of us who love cars are at home with lowrider iconography is not really relevant to the objective realization that this is art in its most individual form as an expression of the spirit of the human being creating it.

At the time of "8 Automobiles," there were only two monthly magazines available to auto enthusiasts in the U.S.,

*Road & Track*, and *Motor Trend*. They remain with us, of course, but there are more newsstand sales today of *Lowrider*, issued monthly since January 1977 (except for 2-1/2 years in the late 1980s). With a circulation of 216,000 copies, it claims to be the best-selling automotive periodical in the country. That wouldn't surprise me; *Lowrider* is available at my local Safeway in Virginia, far from California, where I am not able to buy the far more traditional *Collectible Automobile* or *Autoweek*. At 206 pages, it's probably the largest monthly as well, recent issues of *Road & Track* and *Car and Driver* each having slightly less than 200. Judging by the letters to the editor, *Lowrider's* appeal goes far beyond its ethnic origin; of the seven printed, only two of the writers had Hispanic surnames. Just as mariachis, margaritas, and tacos have spread North, the lowrider, too, may be entering the popular culture of our country at large.

*Lowrider* is intended for the young (19-25) male reader who lives in Aztlan, the metaphoric Chicano homeland that extends deep into the heart of

North America. He is interested in cars and Chicanas, one of whom he can always find on the magazine's cover. The May issue, for example, featured the "ravishing Raquel Estrada," clad in an elaborate feathered headdress, standing in the open doorway of an '84 Olds Cutlass Supreme christened "Aztec Dream." The first featured vehicle is "Azteca," a '78 Thunderbird with an airbrushed Aztec warrior in full feathered headdress confronting a serpent. There's also "La Azteca," an '85 Chevy Blazer embellished with "warriors, princesses, serpents and Aztec icons." Then there's a second "Azteca, a show-worthy '74 Impala ragtop from the streets of Aztlan." This model features a "luxurious interior that could have been fit for Emperor Montezuma himself." Indeed, the Emperor probably would have felt ready for action with the "miniature Aztec sacrificial temple scene in the trunk that has steps leading to the altar." The magazine deems its proud owner to be "a warrior in the game of lowriding."

The dominant accessory appears to be chrome alloys, as 74 pages, in whole

or in part, are devoted to ads for wheels. Surprisingly, there were less than half a dozen ads for sound systems though three of the five technical articles cover acoustics and audio. Surprisingly, also, was one ad for zoot suits, a symbol of the emergence of the Chicano identity in the 1940s and 50s.

*Lowrider* contains short non-automotive articles as well, the May issue featuring "The Legend of Joaquin Murieta," a pistolero; "Price of Glory," a film review, and "The Evolving Tejano Sound."

I think the "Arte y Estilo" exhibit may prove to have been a significant one. Most of the major auto manufacturers now have design studios in Southern California. The Petersen exhibit has called the attention of the stylist and the public to vivid colors and a way to dress up the car body with something other than chrome. As our population grows younger and more ethnically diverse, tapping the *Lowrider* style may prove to have a great market appeal.

—Taylor Vinson

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### *Editor's Notes, continued*

Review No. 34, p. 16; Abstract, "Employee Empowerment at Delphi Packard Electric: Successful Union Management Cooperation," Review No. 32, p. 56).

Biographical data for the other presenters accompanies their abstracts.

Chuck Pelly, who founded DesignWorks and sold it to BMW, told us something of his career after lunch on Saturday. Not on the program, but a welcome addition to it, was Southern California Chapter member *Dean Case's* talk and slide show on Formula SAE racing. This originated with the SAE Mini-Baja of 1976, moving to its inaugural competition in 1981 and

continuing to date. You'd be surprised what imaginative students did with a little Briggs & Stratton engine. With a 600cc limit established in 1988, the current favored engine is the Honda CBR600.

Putting this issue together has been far from a chore. Going over each article and abstract has freshened the memories of this congenial and informative gathering of SAH members and friends. Wordsworth, I think, used the phrase "emotions recollected in tranquillity." Thus ends this happy task and with renewed appreciation to all the presenters.

My thanks, once more, to *Pat Chappell* and *Kit Foster* for their proof-reading skills.

The first presenter at the first automotive history conference was *Richard P. Scharchburg*, who spoke on a topic dear to his heart, land locomotion before automobiles. Richard was an energetic and enthusiastic presence at both subsequent conferences as well. His sudden death in June deprives us of our vice-president (the first director or officer to die on the job) and a willing teacher from whom we never ceased to learn more about automotive history.

—Taylor Vinson

# Words from the Conference Chair

## **The Society of Automotive Historians, Inc.**

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The culture of the automobile may not have been born in Southern California, but it almost certainly grew up there. Thus there was no place more appropriate for our third automotive history conference, "Exploring Automotive Culture: Heritage, Society, Design." If there was any trepidation at mounting such an event on new turf, it was quickly put to rest by members of SAH's Southern California Chapter and director Ken Gross and his staff at the Petersen Automotive Museum. All the necessary arrangements for a successful conference came together without a hitch, in no small part due to their efforts, and the collaboration of our co-sponsor, the National Association of Automobile Museums. Many of those attending deemed this our best conference yet.

We've built a certain following with our three conferences, among both attendees and presenters. The subject matter, however, never gets stale. For this conference we received a large number of proposals for papers dealing with various aspects of motor sports, a subject all but untouched in previous conferences. We were pleased to be able to devote a half day to the topic, and a similar amount of time to the symbolism of automotive culture. In addition to seasoned presenters from various parts of the United States and Canada, we were thrilled to welcome speakers from the United Kingdom and Finland.

We very much look forward to future events in this series. Although the dates and location of the next conference are not yet firm, we expect it to take place during 2002. Watch the Society publications and website, [www.autohistory.org](http://www.autohistory.org), for details.



Kit Foster



# AUTOMOTIVE HISTORY REVIEW

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