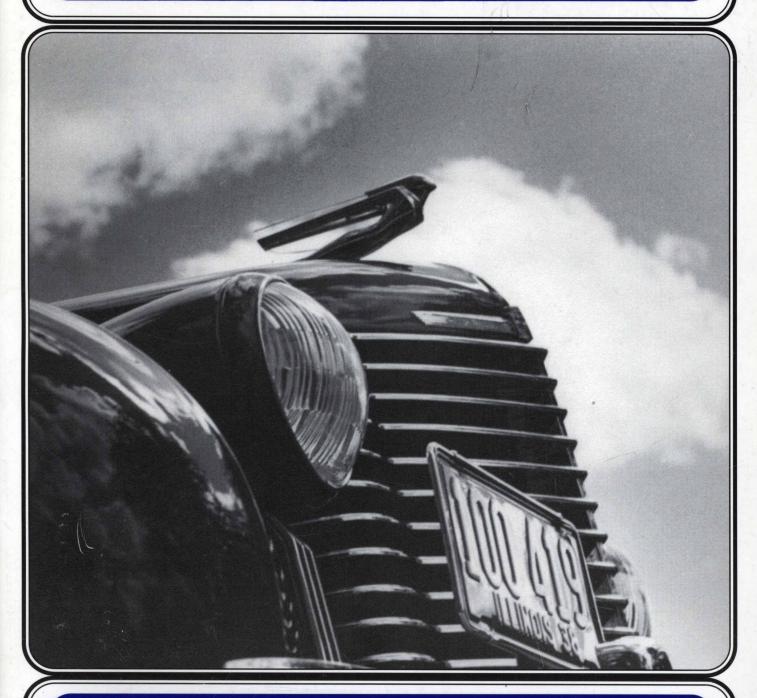
AUTOMOTIVE HISTORY REVIEW

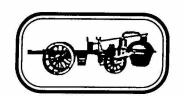
Fall 1998



Issue Number 33



A PUBLICATION OF THE SOCIETY OF AUTOMOTIVE HISTORIANS, INC.



Z. Taylor Vinson, Editor Automotive History Review 1314 Trinity Drive Alexandria, VA 22314 USA Telephone (703) 751-7903 Fax: (202) 366-3820 The Society of Automotive Historians, Inc.

autobor to mente to the Autoria At some availant of me

Fresh 16 July 1996 R2 + 5. 11. Km

Hon. Robert S. McNamara 1455 Pennsylvania Avenue Washington, D.C. 20004

Dear Mr. McNamara:

The purpose of this letter is to ask if you are interested in expressing your views on your years with Ford Motor Company to the members of The Society of Automotive Historians (SAH) through its <u>Automotive History Review</u>.

The SAH was founded in 1969 and has approximately 740 members resident in over 20 countries. Perhaps its most noted members are writers of automotive history and professors of business history. We are unaware that you have ever commented publicly on your time at Ford and the significant part you played in its history (1946-61), and believe that you might actually enjoy talking about something other than Vietnam!

Your role has been addressed by Lacey and others, and the Review affords a means by which you can correct any errors you feel may exist, to tell "McNamara's side of the story", for a select group that would appreciate it. This could cover such topics as your impressions of Ford Motor when you arrived there in '46 as part of the rescue team, the Edsel (whose 40th anniversary is imminent), your own role in the turnabout with respect to such products as the 4-passenger Thunderbird and the Falcon, your counsel in Ford's marketing strategies of the '50s, where you intended to lead Ford in the '60s had you not gone to Washington, etc.

This could take the form of written Q & A's, a taped interview which could be transcribed into an article for your signature, or any other form that you deem appropriate. If you are interested in discussing this, we could meet at the Cosmos Club, of which we are both members, or I could drop in at your office for a few minutes. Although I am a senior attorney at the Department of Transportation, I do have some flexibility in weekday scheduling.

With respect,

Taylor Vinsor

"7/18 To Mr. Vinson

I am grateful for your invitation to contribute to the Automotive History Review. However, to do so responsibly would require research records not now available to me.

Sincerely,
Robert S. McNamara"

The scoop that wasn't. Oh well, we tried.

Automotive History Review (ISSN 1056-2729) is a periodic publication of The Society of Automotive Historians, Inc.

Taylor Vinson, Editor

Officers

President	Sinclair Powell
Vice President	James J. Schild
Secretary	Nicholas Fintzelberg
Treasurer	Christopher G. Foster

Board of Directors

until Oct. 1999 Patrick R. Foster Leslie M. Kendall Michael Lamm

until Oct. 2000 Frederick D. Roe Richard P. Scharchburg Samuel V. Fiorani

until Oct. 2001 Paul N. Lashbrook Leroy D. Cole Joseph S. Freeman

Publications Committee

Patrick R. Foster, Chair Christopher G. Foster Samuel V. Fiorani Taylor Vinson

Copyright 1998, The Society of Automotive Historians, Inc., all rights reserved. All correspondence in conjunction with *Automotive History Review* should be addressed to Editor, 1314 Trinity Drive, Alexandria, VA 22314 USA

Further information about the Society of Automotive Historians may be obtained by writing to the Society of Automotive Historians, Inc., 1102 Long Cove Road, Gales Ferry, CT 06335-1812 USA

Printed by

Imtek

Office Solutions Washington, DC

AUTOMOTIVE HISTORY REVIEW

Fall 1998



Issue Number 33

Editor's Notes	4
Comments on Past Issues	5
In Observance of General Motors at 90 Developing General Motors' Chairmen: The Extraordinary Role of GM's New York Treasurer's Office Since World War I by William P. MacKinnon	9
General Motors of Switzerland by Ferdinand Hediger	19
Two Aspects of Buick: David Buick's Missing Link by Keith Marvin	23
Buick, Harlow Curtice, and the '48 That Wasn't by Richard H. Stout	
Those Elusive Vehicles, Chapter IV: Associations and Clubs by Grace R. Brigham	30
Cars Made in Uruguay (1955 1977) by Alvaro Casal Tatlock	37

Front Cover: 1938 Cadillac Sixty Special Rear Cover: 1937 Ford, converted to producer gas, lumbers towards the finish line in a race held in South America during World War II

Acknowledgments: Each author has provided the photographs that accompany his or her article, with the following exceptions: GM New York offices (p. 14, 15) and Harlow Curtice (p. 27) are copyright 1978 GM Corp. and used with permission of GM Media Archives. David Buick, on page 24, is from The Buick, A Complete History by Dunham and Gustin. The rear cover photo is from Alvaro Casal Tatlock's book, The Automobile in South America.

Back Issues of Automotive History Review

We can offer sets of the 21 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, 32) for \$95.00 postpaid in the USA. Single copies are \$7.00 each (\$9.00 for #32) plus \$1.00 postage, except for heavier #30 and #32 which require \$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.

EDITOR'S NOTES

Issue No. 33 resumes the eclectic contents that have characterized the *Review* over the years. But while this issue is not thematic in the sense that Issue No. 30 (Duesenberg in Europe) and Issue No. 32 (Proceedings of First Automotive History Conference) were, Issue No. 33 does feature a cluster of articles related to the General Motors Corporation.

This is fitting, given that 1998 is the 90th anniversary of the founding of GM. This provides an excuse for the editor to run one of his favorite photos on the cover, that of a 1938 Cadillac Sixty Special, now 60 years old itself, timeless, the first of the three-box designs which became the industry norm after Ford and Chrysler adopted it 11 years later. I came across the photo at Hershey. On the back is the name and address of the photographer, G.L. Osmanson, 715 Liberty St., Morris, Illinois, who called it "Moderne." Mr. Osmanson notes that the camera was a Rolleicord F4.5 Triotar, using Agfa Super Pan Press Film. "Moderne" was shot in bright sunlight, 1/50th of a second at F11, using a dark yellow filter. Developed in Agfa 17, the photo was "printed on Kodabron developed in D72." The car is wearing 1938 Illinois plates (green, according to Keith Marvin).

The GM-related articles begin with "Developing General Motors' Chairmen: The Extraordinary Role of GM's New York Treasurer's Office Since World War I' by William P. MacKinnon. After hearing Bill discuss the topic from notes at the September 1996 Dearborn conference, I introduced myself and encouraged him to put his material in the form of an article as this seemed to be a significant and previously unexplored corner of automotive history. An initial, shortened version appeared in Automotive News near the end of that year. and Bill has worked since then refining it. A former GM Vice President, Personnel Administration and Development, Bill now has his own strategy consulting firm in Bloomfield Hills, Michigan. His articles and book reviews have appeared in more than 20 journals in this country and the U.K. He is editor of At Sword's Point: A Documentary History of the Utah War of 1857-1858, a forthcoming volume in The Arthur H. Clark Company's series Kingdom in the West: The Mormons and the American Frontier.

One aspect of GM's foreign operations is the subject of Ferdinand

Hediger's article on "General Motors of Switzerland," in which he recounts the 60 years (1935-95) that the company assembled cars there. Ferdy will be familiar to you as the author of "The Forgotten Land Speed Record Car of 1905: A Short History of the Dufaux Racing Cars of Switzerland" which appeared in Issue No. 29, and "Itala" in Automobile Quarterly, Vol. 38, No. 1; July 1998. He lives in Dörfli, Switzerland.

Of all of GM's marques, Buick is arguably the popular favorite, probably building more handsome cars over the years that people could afford or aspire to than any other of the company's Divisions. We have two articles whose common theme is "Buicks That Never Were." The first is by former SAH president, Keith Marvin, on "David Buick's Missing Link." This article originally appeared in the Upper Hudson Valley Automobilist for July 1980 and has been revised. Now a resident of Worcester, Massachusetts, Keith observes that "the tale is written from the angle of the manner in which so many crooked promoters were able to visit a community, show a car they'd put together for the occasion, sell stock and take off." There were many such scams, and Keith mentions some in his letter excerpted below in comments on Issue No. 32.

The second article gives us a sense of what it was like in the Buick design studio in the late 1940's when division manager Harlow Curtice worked hand in hand with the head of GM Styling, Harley Earl, to create and maintain a strong brand image. This article comes to us from the late Richard H. Stout, who was a young designer in Buick styling at the time, and centers around the aborted 1948 Buick. When the '48 Cadillac and Olds 98 appeared, it was a minor mystery as to why the senior Buicks didn't follow suit. Dick's article provides a colorful account (an expansion of his letter in the June 1994 Special Interest Autos). He found artwork on the car in an article on a Buick designer in Michigan History Magazine. Dick forwarded it to me a couple of years before his death in 1996, and was interested in having us publish it.

Leaving GM, we return to *Grace Brigham*'s "Those Elusive Vehicles," this time Chapter IV, titled "Associations and Clubs." Chapters I and II appeared in Issue No. 29, and Chapter III in No. 31. The

widow of SAH's co-founder and recognized herself as both an honorary member and a founding member, Grace, who lives in Marietta, Georgia, has already submitted Chapter V for a future issue.

Finally, we are indebted to Alvaro Casal Tatlock, our only member in Uruguay, for enlightening us on automotive history in South America. From his book The Automobile in South America, subtitled The Origins: Argentina, Brazil, Paraguay, Uruguay, comes our article "Cars Made in Uruguay 1955-1977." This is comprised of materials from the book relating to home-grown cars of Alvaro's country, and adds an account of his 1997 visit to the former manufacturer of one of those cars, who now lives in New Jersey. Alvaro himself lives in Montevideo where he is a journalist and curator of the national car museum. The book is available for \$24 by writing him at 26 de Marzo 1217 #A502, Montevideo.

One more comment. The 1996 letter to Robert S. McNamara, photocopied on the inside front cover, was a try by Richard F. (Dick) Merritt and myself to develop an article for the Review in time for Edsel's 40th Anniversary the following year. Many have been the rumors that McNamara was against the project from the start. Dick had worked at Ford during the middle '50s and tells stories of how assembly line supervisors were ordered to concentrate on the quality of Ford nameplate products, resulting in fields of Edsels that had to be reworked before being shipped to dealers. We hoped to get McNamara's views on Edsel and anything else about his years at Ford that he cared to talk about. We should all be so graceful in our refusals.

I'll end on a housekeeping note. Fred Roe advises that we should raise the price of back issues and sets of back issues to compensate for increased postage costs. These prices have not changed for many years. You'll find the new prices in the box on the table of contents page.

My thanks to all our authors, current and future, who await so patiently the publication of their articles. And my thanks once more to our proof readers, *Kit Foster* and *Pat Chappell*, whose input is required for a quality publication.

- Taylor Vinson

COMMENTS ON PAST ISSUES

Number 31

"Those Elusive Vehicles, Chapter III: The Hunt for Firsts..."

A name which seemed to me strangely to be missing from the Brigham list is that of A. Winton . . . after all, he was in production in 1897 and no American gasoline-powered car was even close in pre-1900 sales. . . .

H.C. Hopkins Spain

I was quite surprised not to find Peugeot, as motorcar builder — 1891 — in the list (refer to <u>Armand Peugeot</u>, by Piero Casucci, Automobilia 1988). Panhard & Levassor first car is dated from 1890 and not 1894 as stated (see <u>In First Gear—The French automobile Industry to 1914</u> by *James M. Laux*, Liverpool University Press 1976, page 16). [I enclose] two extracts from *La Locomotion Automobile* (the oldest automotive magazine in the world, first issue is from 1894) which contain the list (not exhaustive) of [French] car manufacturers in July 1897 and July 1898.

Laurent Friry France

Note that the 1897 page (Fig. 1) contains some of the world's first used car ads.

Ed.

Brigham gives perhaps more credit than is due to Herbert Austin, whose petrolengined tricycle is usually dated to 1896, not 1895 as Brigham does She does not include the first Lanchester in her list. . . . As the 1895 Lanchester "Stanhope Phaeton" was not only the first practical British gasolineengined car, but arguably the most advanced motor car to date, I feel that it is an omission that needs to be pointed out. In his book, The Lanchester Legacy (vol. 3), Chris Clark, the Historian of the Lanchester Register, credits the 1895 Lanchester with being the world's first car actually designed to run on pneumatic tires, the first to combine Ackermann steering with a castor angle to achieve self-centering, the first to use beveltype differential gears in the rear axle, and the first to use a brazed steel-tube chassis frame, designed expressly to be torsionally rigid.

> Victor H. Lane Wales

In Issue 31 there was mention made of some early South Australian motor vehicles. . . . Australia, however, comprises

several states and each of them has a story to tell.

New South Wales was the site of British establishment at Sydney so could be expected to have some early stories, as it does with an account of a traction engine in 1857. Its owner bestowed the title "Megaethon" on it, indicating his familiarity with the Greek language - Mega = giant, aethon = vapour or gas (steam). The aboriginals called it "buggy-buggy" and it made an overland journey from Morpeth on the Hunter River to Bundarra in the northern area where a part of its smoke stack is said to survive as a garden roller. In 1860 there was a report of a steam engine being used to replace a bullock team for hauling a load of freight to the south-western town of Goulburn, although the roads were obviously not capable of withstanding the load. An attempt was also made to establish a steam passenger coach to Parramatta but it seems likely that such efforts used imported machines although reports of that time are rather vague about the origin of the machines.

Although an element of doubt exists regarding the S[outh] A[ustralian] stories about the Gilgen effort of about 1880 due to a lack of contemporary press reports it is my belief that such are only likely to be found in German language newspapers of the Barossa Valley region as I have formed the opinion that the Gilgens (of Swiss origin) fell from grace in the view of the Establishment by upstaging the official reception being extended to the young Princes (grandsons of Queen Victoria) then visiting. The surviving story mentions that the machine caught the attention of the teenagers who wanted to ride in it, just the kind of diversion from the stifling schedule of official occasions and long-winded speeches which would appeal to them. It was also stated that officialdom decreed that the vehicle be banned from travelling on the roads in the area, just the kind of action authority could take to make its displeasure known.

No doubt, however, exists about the existence of a very heavy steam truck built in 1873 as the contemporary references are clear. It was built in Victoria by The Phoenix Foundry Company Ltd. of 40 Armstrong Street, Ballarat, for its own use to transport railway locomotives. At that time expansion of the railway system was a

priority item and the Phoenix Company, founded in 1856, was a significant contractor for rolling-stock production but its premises were about 1/3 mile from the rail. According to *The Ballarat Courier*, 6 February 1873, the first tender "was delivered to the Western Station yesterday by means of the company's road steamer."

[The machine itself was described] in the Argus Exhibition Supplement of 28 October 1880 as follows: "It consists of a massive wrought iron frame about 30 ft. long and 5 - 6 ft. wide, upon the top of which are fixed rails at the usual gauge. The frame itself is carried on four very massive castiron wheels rather more than a foot wide, the smaller pair being supplied with a powerful steering apparatus. At the end of the main frame is placed a boiler of the locomotive type, but comparatively short; from this steam is supplied to a pair of cylinders situated beneath the frame. These drive by means of powerful gearing the large pair of wheels, and so propel the whole machine. A winding drum for drawing locomotives up upon the lorry, and hydraulic presses by which one end of the lorry can be raised and lowered at will, both actuated by steam power, complete what is evidently a very efficient though somewhat costly appliance."

As the company was successful in gaining Council approval to lay a railway line along Armstrong Street to the siding in 1883, it can be assumed that there was then no longer any need for the lorry, that its highly-specialized nature would not have allowed it to be gainfully used elsewhere and so it would have been dismantled for "recycling."

Thanks is extended to Mr. David Manson and Mr. Graeme Reynolds for their assistance in gathering this material.

Max Gregory Australia

I thought [readers] might like to see the enclosed photos of a full-size working replica of the 1801 Trevithick steam carriage. Completed in 1996 after many years of work, it appears regularly at steam events in England. These photos were taken at the 1996 Dorset Steam Fair (Fig. 2)

Nick Georgano Guernsey

LISTE

des Constructeurs de Voitures automobiles

Vapeur

Decauville-Serpollet, 13, boulevard Malesherbes. De Dion et Bouton, 12, rue Ernest, Putcaux. Le Blant, 10, avenue de l'Opéra. Société des chaudières Scotte, 56, rue de Provence.

Pétrole Amiot (avant-train), 47, rue au Château, Asnières,

Audibert et Lavirotte, 12, chemin des Quatre-Mai-

sons, Lyon. Audineau, carrossier (formes spéciales pour voitures à moteurs de tous systèmes), 2, rue Brunel, Paris. Bollée (voiturette), 463, avenue Victor Hugo. Briest frères, 109, rue de Rennes, Nantes. Cambier, à Lille (St-Maurice), Nord.

La Carrosserie Industrielle, 228, faubourg St Mar-

tin, Paris.
Cohendet et Cie, 166, quai Jemmapes, Paris.
Cie Anglo-Française des Voitures Roger, 52, rue des Dames.

Cie générale des automobiles, dir. Triouleyre, 2, r. de

Compiègne.
Clément (motocycles), 20, rue Bruuel.
Cusset, 130, rue du Bois, Levallois-PerretDalitol, 172, quai de Jemina per.

David, moteur P. Gautier, 19, rue Geoffroy-Saint-Hilaire.

Hilaire.
Delahaye, 34, rue du Gazomètre, Tours.
Diligeon et C, 54, rue St-Maur.
Fageot, 2, rue Boutard, Neuilly.
Fisson et Cie, 14, rue Maublanc, Vaugirard.
Foucher et Delachanal, 3, rue Tayler.
Gauthier et Wehrlé, 31, rue Cavé, Levallois.
Grivel (tricycle), rue des Poissonniers, Neuilly.

Grivel (tricycle), rué des Poissonniers, Neuilly.
Gustin, 2, rue Baudin.
Klaus, 42-44, rue de Paris, à Boulogne s-Seine.
Landry et Beyroux, 19, rue Albouy.
Lepape, 23, rue Montaigne.
Léon Lefebvre, 4, rue Commines.
Loyal, 204, rue Saint-Maur.
Maison Parisienne, 71, avenue de la Grande-Armée.
Morel (victoriette), 28, boulevard Poissonnière.
Mors, 48, rue du Théâtre, Grenelle.
Panhard et Levassor, 19, avenue d'Ivry.
Prétot (avant-train-moteur), 44, avenue Philippe-Auguste.

Auguste. Richard, 13, rue Théophile Gautier, Paris-Passy. Rochet et Schneider, 202, rue Paul-Bert, Lyon. E. Rossel, 82, rue des Sarrazins, Lille. Louis Rose, 23, rue Fontaine-Saint-Georges

Société des Automobiles Peugeot, à Audincourt, Doubs.

Société des vélocipédes Michaux et des véhicules automobiles, 12, avenue de Madrid, Neuilly-sur-

H. Tenting, 40, rue Curial, Paris.

Electricité

Darracq, 12, rue Eugène Flachat. Jeantaud, 51, rue de Ponthieu. Krieger, 22, rue Le Peletier.

Publicité par Voitures Automobiles

Le Bureau technique de la L. A. reçoit les enga-gements de publicité par affichage sur la grande voiture automobile réclame circulant dans Paris. Demander les conditions au bureau du journal, 4, rue Chauveau-Lagarde.

COCHER 19 ans, sachant très bien conduire, recomm. par patrons, désire place Paris ou campagne. Georges, 143, av. du Roule, Neuilly-s-Seine.

VICTORIA Roger, 4 chevaux, 2 places et strapontin, capote cuir, presque neuve, 5.200 fr. — S'adr. à la L. A. (N° 152).

MÉCANICIEN de précision demande em-ploi dans une usine d'auto-mobiles ou fabrique de vélos. — Ecrire Adrien, 6, rue Montrosier, Neuilly-sur-Seine.

29

VENDRE moteur silencieux et perpétuel produisant la force avec ses seuls organes, c'est à dire sans vapeur, ni pétrole, ni électricité, etc.

Pour les renseignements, s'adr. à M. COT, 34, avenue d'Italie, Paris. (N° 136.)

VENDRE voiture Roger, 2 places, capote cuir, 2.000 francs.

BELLE OCCASION A vendre une voiture Panhard 2 places, capote cuir, moteur Daimler 235, nouveau carburateur, roues cerclées en fer; nouvellement repeinte, fonctionnement irréprochable, 2.800 fr. S'adr. à la L. A. (Nº 137.)

TRICYCLE de Dion à vendre 1.500 fr., état neuf, pas roulé, 200 kil.; on échange avec soulte contre voiture. — Jules Lautrec, à Béziers. (Nº 146).

AUTOMOBILE Panhard et Levassor, 2 places, avec capote en tris bon état, à vendre. — Leroux, 53, boulevard Exelmans, Paris. (Nº 147).

de suite contre auto-ON ECHANGERAIT de suite contre auto-mobile en bou état. de préférence voiturette Bollée 1897, charrette attelée de ponette noire 1 m. 40, très jolie, très vite, belles allures. - S'adr. M. L. A., 81, rue Saint-Lazare (Nº 148).

BOLLEE 1897, en bon état, à vendre 2.2001, y compris accessoires ayant conte 400 fr. (N° 149).

VOITURETTE Bollée à vendre avec frein Lemoine et accessoires divers. Voir et essayer 157, rue de la République, Puteaux. (Nº 150).

OCCASION Duc Peugeot 2 places, graisseurs Henry, marche arrière. 3.200 fr. Dalifol, 172, quai Jemmapes.

ON DEMANDE d'occasion Tricycle de Dion.
Dalifol, 172, quai Jemmapes. (Nº 151).

MOTOCYCLES & AUTOMOBILES d'occasion ACHAT - VENTE - RÉPARATIONS de Voitures de tous systèmes ALPH. ELDIN, INGÉNIEUR LYON - 9, Rue Henri IV - LYON

Administrateur-gérant : VUILLEMOT

Imprimerie spéciale de la Locomotion Automobile, G. DESMARES et C*, !51. avenue du Roule, Neuilly-s-Seise



Fig. 2a - 1801 Trevithick Steam Replica, 1996.

May the shade of Siegfried Marcus (as it is now usually spelled) haunt me for not catching the typos that called him "Siefried" (1864) and "Siegried" (1874 - 75).

The Editor

"The Cars of Kaiser Bill"

Frans Vrijaldenhoven mentions that the cars carried the imperial arms on doors and even headlamps. Further to distinguish him from 'mere mortals' on some occasions he had a bugler who played a four-note tune "Der Kaiser Kommt." The Kaiser's uncle, England's King Edward VII, was so taken with this that he told his engineer, Charles Stamper, "Get yourself a bugle and learn a tune," presumably not the same tune as the Kaiser's!

Nick Georgano Guernsey

Given King Edward's notorious pre- and post-prandial pleasures, we dare suggest "Get Out and Get Under."

"R A F, Austria-Hungary's Knight-Engined Car"

May the translator offer a few corrections and additional comments.

page 18: "Lohner' for "Löhner"; "von Klinger" for "von Klonger," and "shaft drive" for "shaft driver."

The article on which the translation was based stated that the first RAF had four-wheel brakes. If this is true, the RAF would be a pioneer, ahead of Isotta-Fraschini and the rest, I guess. Another source, von Fersen, writes of the car: "Special attention was paid to the brakes. There were two independent systems. Two foot-pedal brakes each working on a separate drum in front and aft of the gear box, the third brake being a hand brake working simultaneously on both drums in the rear wheels."

page 19: The last two sentences ("However... itself." in the first full paragraph (which begins "In the meantime.") should be replaced with: "However, the production of the LK 1 would be profitable only if another manufacturer used the engine. RAF found a willing buyer in Puch of Graz for a few engines of their expensive line. Thus, briefly, there were two Knight-engined cars being made in Austria-Hungary."

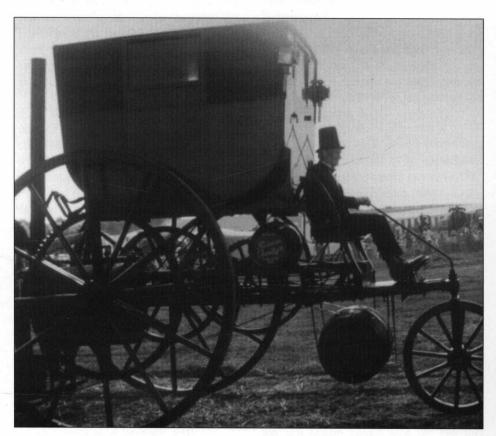


Fig. 2b - Sideview, 1801 Trevithick Steam Replica, 1996.



Fig. 3 - The Jelcz PR 110 Bus

Reference to Fig. 2: The light delivery van (Fig 1) appears more closely related to passenger cars than the FDL which looks rather heavy and, unlike the passenger cars, is chain driven.

Fig. 3: Other references identify this car as the 18/50 HP model.

Ferdy Hediger Switzerland

"The Jelcz Truck and Bus of Poland"

In my article, the photo in Figure 7 is incorrect. I send you a picture of the Jelcz PR 110 showing this bus from the rear (Fig. 3).

Robert Pryzybylski Poland

Number 32

"The Anderson Motor Company"

[An earlier account is] "South Carolina's Wonderful Anderson Car" by John Hammond Moore and published in The Smithsonian Journal of History for June 1966. . . . What I found interesting in Moore's story is Anderson's view surrounding the fact that the car, though selling nationwide, didn't go over where it was built. And of course, the main reason for this was the competition from Ford and its contemporaries. As Moore stated, Anderson was a "strange mixture of a Horatio Alger hero, Henry Grady, Ben Franklin, Henry Ford, Ann Landers and George Babbitt".... He believed . . . that . . . the people of Rock Hill and the area should realize that his factory put many to work and that as they supported stores and shops of Rock Hill, the average car buyer should do likewise instead of buying a Detroit-made product.

I found the Pascoe account extremely interesting . . . as . . . I've specialized in digging out the histories of these assembled cars which, although they existed briefly, are in many cases unknown. I'd mention among these the Premocar (Alabama), Curtis (Arkansas), Klieber and Paramount (both of California), Innes (Florida), Bour-Davis (Louisiana), Bay State (Massachusetts), and Commander (Illinois and Wisconsin).

Another one was the Harris Six, a car built in Menasha, Wisconsin, and the only one I know where the court ordered the company to build as many cars as could be assembled to offset the cost of bankruptcy proceedings. This was in 1923.

The two cars I'm trying to bring to light now (March 1998) are the St. Louis of 1922 and 1923 and the Vaughan of Greensboro, NC; also the California, a car built by Leach in California.

Interestingly, we know that at least two and possibly as many as five St. Louis cars were built. I have a catalogue, but can't find any pictures of them. They were highpowered sporting cars built by the Neskov-Mumperow Company of that city which was also the St. Louis dealer for the Anderson and Dort cars. It was no relation of the St. Louis which eventually became the Dorris.

The Vaughan is an elusive thing. We know that it was shown at the Carolina

Exposition at Greensboro, NC in September 1921 and – like some other cars – was listed as having a Rochester-Duesenberg 4-cylinder engine or a Weideley Twelve. After the exposition, nothing was heard from the Vaughan until 1923 with a brief flurry in the automotive press – and then nothing.

The California was a lesser-priced companion car of the Leach and we know it was exhibited in a Los Angeles showroom for at least a week.

I've learned to recognize the warning signals on whether they were on the up-and-up or just stock promotion deals. These signals are: 1. No promotional car available. This should have been a warning. 2. In promotional literature, the inclusion of a breakdown surrounding giants in the motor industry who, by taking a chance, made \$\$\$\$ by their risk. This was a 'must' in nearly every case I've encountered. 3. The factory: sometime a rendering of the factory of some established but not too well known company which wouldn't be readily identified by the prospective investor, or an impressive plant, sketched to order. If there was no rendering, the brochures explained that the originally contracted buildings had proven too small and that the new plant was in the process of completion. You might think that no one could fall for this ploy, but surprisingly, many did.

> Keith Marvin Massachusetts

In Observance of General Motors at 90

Developing General Motors' Chairmen: The Extraordinary Role of GM's New York Treasurer's Office Since World War I

by William P. MacKinnon

Many, if not all, institutions have special pockets of unusual talent with power to impact the organization in various ways. They come in all sizes and shapes. Take for example the U.S. Army's Special Forces (Green Berets), the Roman Catholic Church's Society of Jesus (Jesuits), Lockheed Aircraft's "Skunk Works," Procter & Gamble's brand managers, Ford Motor Company's European operations, the U.S. State Department's Policy Planning Staff, the old A.T.&T.'s Bell Labs, and the Internal Audit Staff of pre-Jack Welch General Electric. In most instances these groups are in close proximity to the locus of power - headquarters - but in some interesting, colorful and highly productive cases they instead are in unlikely, out-of-the-way seemingly places. These groups do not spring up spontaneously or accidentally. They periodically arise and take shape in response to a crisis or special need often linked to the will of a strong mentor or a of such leaders. series Because organizations, taken broadly, detest elites — after all they cause envy, heartburn, and are often difficult to "manage" — the institutional knives are often out for them depending upon the amount of hubris involved. Such groups are not necessarily long-lived, as in the on-again/off-again case of the army's Special Forces and their distinctive head gear. Those elites that last for the long haul spawn not only talent, product, or influence but a rich lode of organizational legend and folklore. They are groups worth studying.

Over its nearly one-hundredyear history, General Motors Corporation has had several such groups that are still functioning. Two of them are well known: Charles F. Kettering's Dayton Engi-neering Laboratories Company - Delco — which became institutionalized as the GM Research Labs; and Harley Earl's Art & Colour Section, which became the GM Design Staff. Both organizations are now at the GM Technical Center in Warren, just north of Detroit. The group in GM least-known to outsiders is in New York City; since World War I it has been a highly unusual developer of senior general managerial talent rather than of specialists skilled in science or vehicle styling as in the case of the other two staffs. I refer to the small New York Treasurer's Office ("T.O.-N.Y.") of GM's large, powerful Financial Staff, an extraordinary group which has never been studied outside of the company.2 As we enter the U.S. auto industry's second century, it is worth thinking about this small sub-group at least briefly.

But first, I offer a few comments about perspective. This article is not the official, authorized General Motors version of what has unfolded since World War I in New York City — 600 miles from Detroit. There is no such commonly understood account. Unfortunately, there is not even a reasonably current history of the company notwithstanding its colossal size — 1997 net revenues of \$178.2 billion — and significance.3 I am not General Motors' spokesman, then, but rather am an independent management consultant advising Chief Executive Officers of many companies grappling with complex business problems. I also happen to be a published historian. During the 25 years 1962-1987, I was a GM executive with the first 10 of these years spent in the New York Treasurer's Office followed by 15 years in Detroit in the Human Resources function. When I resigned in 1987, I was Vice President in

charge of GM's Personnel Administration and Development Staff. As such, I was the senior corporate staff officer functionally responsible for GM's salaried, managerial, and executive work force. Earlier — while in New York — I was, in effect, staff director of the Board's Bonus & Salary Committee and of its Nominating Committee. For years I attended a portion of each monthly Board meeting and that of its Executive Committee, and managed the Executive Committee's semi-annual Bonus Reviews and Progression and Succession Reviews. I believe that mine is a unique combination of experiences and perspectives. I have studied this article's subject for more than 35 years — often at close quarters — and have recently interviewed at length each of the six men now living who have been both Chairman and Chief Executive Officer of General Motors:4

- James M. Roche
- Richard C. Gerstenberg
- Thomas A. Murphy
- Roger B. Smith
- Robert C. Stempel
- John F. Smith, Jr.

The intent of this article is to present an informed, balanced view of an extraordinary office by an historian who worked there for a decade, understands General Motors personally as well as organizationally, and has recently obtained the views of GM CEOs born as early as 1906 and whose work experience in the New York Treasurer's Office began as early as 1938. This is not a full, complete account of their preparation for GM's most senior leadership position or their performance. It is a description of a significant developmental experience that they shared during the formative years of their careers.

Spring 1998 .

[©] Copyright 1998 by William P. MacKinnon. This article is based on a paper of similar title presented on September 6, 1996 at SAH's Dearborn, Michigan centennial conference "The American Automobile Industry - Past, Present, Future." Edited or summarized versions of that paper have appeared in *Automotive News*, October 21, 1996, 38 and 40, as well as in *Automotive History Review* No. 32 (Spring 1998), 59.

Why pause now to study this small outpost of GM's Financial Staff based in Manhattan? One reason runs to the significance of T.O.-N.Y.'s role and that of its alumni. Because General Motors has never had a company-wide training experience for its managers — in the sense that GE, IBM, and Xerox have had them — the Treasurer's Office for decades partially filled an educational vacuum in GM on a de facto basis. In part reflecting this influence and impact, through the Treasurer's Office have passed five of the nine GM Chairmen since Alfred P. Sloan, Jr.: Albert Bradley and Frederic G. Donner (deceased); as well as Messrs. Murphy, Smith, and Smith, Jr., who have survived them. In addition, a sixth Chairman/CEO, Richard C. Gerstenberg, supervised T.O.-N.Y. while Treasurer, although he always worked out of the Detroit headquarters (Fig. 1). And there also have been three Vice Chairmen who at one time worked in T.O.-N.Y. or supervised the office (Donaldson Brown, George Russell, and Oscar A. Lundin), and a number of other such Board members who retired as Executive Vice Presidents, including F. Alan Smith and William E. Hoglund. Of the six members of what was the President's Council — GM's internal governing body until its abolition on October 6,1998 — four were alumni of

the New York Treasurer's Office.

Among those T.O.-N.Y. veterans who left GM decades ago, there have been an equally colorful group of people accomplished in either business, public affairs or both:

- Edward R. Stettinius, Jr., who after leaving T.O.-N.Y. became Chairman of U.S. Steel at age 37, F.D.R.'s last Secretary of State at age 44, and a founder of the United Nations before his death at age 49.
- Ernest R. Breech, who went on to become Chairman of the Ford Motor Company as well as of Trans World Airlines.
- John J. Raskob, Alfred E. Smith's presidential campaign manager in 1928 and subsequently a developer of the Empire State Building.
- Robert R. Young, CEO of first the Chesapeake & Ohio and then the New York Central Railroad.
- Lane Dwinnell, Governor of New Hampshire (1954-1958), and subsequently Assistant U.S. Secretary of State for Administration as well as Administrator, Agency for International Development.

Present in the New York office at one time — but not directly assigned to it — was Captain Eddie Rickenbacker, the great World War I ace, who worked for Cadillac Motor Car Division and subsequently became CEO of Eastern Airlines when GM's General Aviation owned large shares of Eastern, Fokker, North American Aviation, and Bendix.⁵

But that is largely the past. What of now? Think about the talented people atop GM today who spent many of their formative years in the small New York Treasurer's Office:

- John F. "Jack" Smith, Jr., Chairman /CEO, who was in T.O.-N.Y. for the ten years 1966-1976.*
- G. Richard Wagoner, Jr., President and COO.
- Louis R. Hughes, Jr., Executive Vice President, New Business Strategies.*
- J. Michael Losh, Executive Vice President and CFO.*
- V. Maureen Kempston-Darkes, President of GM of Canada, Ltd. the largest manufacturing company in the second biggest country in the world.
- Mark T. Hogan, Vice President and General Manager, NAO Small Car Operations.
- John F. Smith, Vice President and General Manager, Cadillac Motor Car Division.
- Michael T. Smith, Chairman and CEO, Hughes Electronics Corporation.
- George A. Peapples, Vice President, Public Policy and formerly Assistant Secretary of the Navy - Financial Management.
- Robert W. Hendry, Vice President and Group Executive, GM, Chairman and Managing Director, Adam Opel, A.G., and President and COO, Saab Automobile A.B.
- Alan S. Dawes, Vice President and CFO, Delphi Chassis Systems.
- Frederick A. Henderson, Vice President and Managing Director, GM do Brasil.
- Michael J. Burns, Regional President GM Europe.
- John D. Finnegan, Chairman, GMAC.

Again, if one examines the more recent New York Treasurer's Office alumni group, one finds outside of GM today:**

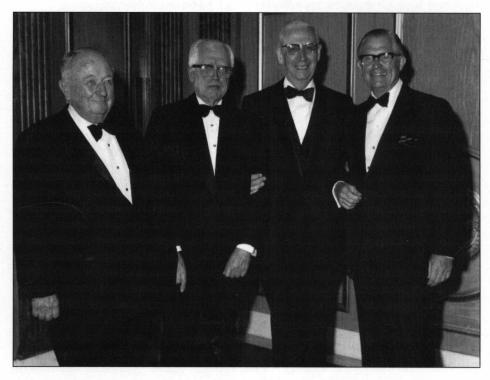


Fig. 1 - A quartet of GM Chairmen - Albert Bradley, Frederic G. Donner, James M. Roche, and Richard C. Gerstenberg (photo courtesy of Richard C. Gerstenberg)

^{*} Four of the six members of what was the GM President's Council until October 6, 1998.

^{**} If one also includes business leaders who once worked in GM's Detroit Treasurer's Office, this list grows longer. An example is H. Marshall Schwarz, Chairman and CEO of United States Trust Company of New York, who spent the summer of 1960 in GM's Detroit-T.O.

- Thomas G. Plaskett, who became CEO of Continental Airlines and Pan American Airlines and then Chairman of Greyhound Lines.
- Heidi Kunz, formerly GM's Vice President and Treasurer, who is now CFO of ITT Industries.
- John C. Pope, Chairman of MK Rail and formerly CFO of United Airlines.
- James A. Eskridge, until his resignation, Group President of Mattel, Inc.
- John R. Rines, until recently Executive Vice President (Global Markets), Citibank.
- Charles E. Golden, a Board member as well as Executive Vice President and CFO of Eli Lilly.
- Robert T. O'Connell, a Director and Senior Vice President-Strategic Business Planning, RWD Technologies, Inc.
- Courtney F. Jones, formerly CFO of Merrill Lynch.
- James E. Ayers, recently retired Vice President and CFO, Dana Corporation.
- Donald D. Kittell, Executive Vice President, Securities Industry Association and formerly Executive Vice President, New York Stock Exchange.
- Peter B. McKee, Senior Vice President and CFO, Allegiance Healthcare Corporation.
- E. Stanley O'Neal, Executive Vice President and CFO, Merrill Lynch & Company, Inc.
- Nancy A. Garvey, until recently Vice President and Controller, AlliedSignal, Inc.

Given this record, it is fair to ask: What was and is GM's Treasurer's Office, how and why did it start, how did such talent develop in it over the century, and what impact — for good or ill — has the office had on the performance of General Motors?

The precise origins of T.O.-N.Y. are unclear, probably because of the chaos of William C. (Billy) Durant's post-World War I leadership, and the fact that until recently GM has not had much of a real sense of its own history (or related set of archives) in the way that other institutions such as Ford Motor Company, the American military services, or the Mormon Church all have had for a century or more. With the advent of the DuPont Company's ownership position in GM — more than 20 percent at one point — the second and final departure of Mr. Durant as CEO, the temporary stewardship of Pierre S. DuPont (briefly

GM's CEO as well as Chevrolet's general manager), and at last the ascendancy of Alfred P. Sloan, Jr., it was decided in the early 1920s that Board meetings were to be held in New York rather than in Detroit. The local GM infrastructure that was already in place in Manhattan to deal with external financing matters relating to the New York capital markets would, in effect, "staff" the Board and its standing committees. The anomaly was that although the Treasurer's "Office" was in New York, the Treasurer — then the talented Meyer Prentis — was in Detroit, perhaps because, as one retired Chairman recalls being told, he was the only man trusted to or capable of a key internal task — consolidating the divisions' monthly operating statements during the chaotic Durant era.

As Thomas A. Murphy, who was recruited in 1938, points out, Mr. Sloan was not a financial man - although, forgetting his electrical engineering degree from M.I.T., many people over the years thought that he was. And so Alfred P. Sloan, Jr. reached out for financial talent and found it among one of GM's principal owners, i.e., at the DuPont Company, from which both Donaldson Brown and John J. Raskob crossed into GM during this period. Murphy argues that Brown and Raskob were not really in the New York Treasurer's Office because they were at the officer level of responsibility and so senior — but from this distance it certainly looks as though they surely were of it. To these men falls the credit for then recruiting Albert Bradley by 1923 and Frederic G. Donner in 1926 as well as, presumably, other stars like Edward R. Stettinius, Jr., Robert R. Young, and later Ernest R. Breech. Of this group, Bradley and Donner stayed for the long haul and became Chairman of GM in succession after Mr. Sloan relinquished this role in 1956, although many of the others - like Stettinius, Breech and Dwinnell — worked for GM for significant time spans that were foundational for their later, highly successful careers at U.S. Steel, the U.S. State Department, and at Ford.6

Albert Bradley and Frederic G. Donner were brilliant, farsighted and — for their time — extraordinarily well-educated American business people, as was, of course, Mr. Sloan. Mr. Donner, with a somewhat austere exterior and a razor-like, analytical mind, was a Phi

Beta Kappa in economics from the University of Michigan, while Mr. Bradley, with a delightful sense of humor, had degrees from both Michigan and Dartmouth, including a Ph.D. mathematics. During the 1920s Donaldson Brown published seminal papers on the role of return on investment considerations in automobile pricing policy,7 and Bradley and Donner set out to build a power house of financial talent in New York by recruiting in their own image, especially advanced degree holders from their own two universities.

At this time, and for decades to come, the New York office and the Comptroller's Staff in Detroit were virtually the only part of General Motors to recruit advanced degrees. Tom Murphy considers himself and George Russell later Vice Chairman — to be exceptions to this recruiting behavior because during the 1930s they were hired out of undergraduate programs at the Universities of Illinois and Minnesota, respectively. In the 1950s and 1960s Donner, a University of Michigan alumnus, would insist on scouting out the Harvard Business School (as well as Ann Arbor) for a leavening of its product. Starting in the 1970s what sometimes turned up at Harvard was engineering talent that GM operating divisions had sent east for an M.B.A. and which developed an interest in finance while in Boston — as in the case of Tom Plaskett, Lou Hughes, and John Smith (no relation to Jack). Beginning in the 1960s, New York also cast its recruiting net at the operating divisions, a thrust which prompted Dick Gerstenberg to send Roger Smith to the Framingham car assembly plant in 1966 to recruit Jack Smith, a Boston University M.B.A., for the New York Treasurer's Office.8

Starting in the 1960s and 1970s, T.O.-N.Y. also bore down on the subject of recruiting talented women analysts, and, as time passed, it contributed to the development of more women officers than any other part of GM — as in the cases of Heidi Kunz, until recently GM's Vice President and Treasurer and now CFO of ITT Industries, Nancy A. Garvey, until recently Vice President and Controller of AlliedSignal, Inc., and V. Maureen Kempston-Darkes, currently President and General Manager of GM of Canada. The first woman in GM's history to be compensated under its pheno-

Fall 1998



Fig. 2 - The "bullpen," otherwise known as the Executive Compensation Section. Edwina Weisheit is the lady on the right in this July 1968 snapshot taken by the author shortly before T.O.-N.Y. moved from 1775 Broadway to 767 Fifth Avenue.

monally successful Bonus Plan was Edwina G. Weisheit, a financial analyst recruited to T.O.-N.Y. during the 1950s (Fig. 2).

By the time I arrived from the Harvard Business School in 1962, the heart of the office was a group of perhaps 50 people who called themselves financial analysts — a self-styled title designed to mask the demeaning flavor of the official personnel moniker: "clerk and/or statistician." I was assigned to Roger Smith — as was Jack Smith, when he transferred in from Framingham four years later — and Roger (a Director of Financial Analysis) reported to Tom Murphy, then the junior of two Assistant Treasurers, who spent substantial amounts of time upstairs one floor with Fred Donner, Chairman and CEO. T.O.-N.Y. was located on the 23rd floor of 1775 Broadway — at 57th Street — (Fig. 3) and in 1968 moved east to 58th Street and Fifth Avenue, where the GM Building is still located (Fig. 4).

What these people did — in an organization structure of four analytical work groups or sections — was what one might consider the "normal" corporate treasury function: investing excess operating cash, floating securities issues, designing employee benefit plans, costing labor negotiations, and forecasting GM's capital needs. Superimposed on top of this workload was the highly unusual task of

drafting all of the reports and chart presentations used for the monthly meetings of the Board of Directors and those of its standing committees that met in New York: at that time the Finance, Bonus & Salary, Audit, and Nominating Committees. (The Board's Executive Committee — then composed entirely of inside Directors and meeting on a different time schedule in Detroit — was serviced primarily by GM's Detroit-based apparatus.) To these conventional and unusual responsibilities was added over time a rich but demanding stew of collateral duties not usually part of a corporate treasury function; they did much to develop the seasoning, perspective, communications skills, and work capacity of young analysts and financial managers for more general responsibilities:

- Serving as the administrative assistant to the Chairman/CEO for a two-year assignment — as in the case of Alan Smith, later an Executive Vice President and Board member himself.
- Developing and then presenting a chart presentation on the state of the economy and the operations of General Motors at the monthly meetings of first the Administration Committee in Detroit and then the Board itself in New York — as was done first by me and then by Jack Smith, who argues that this often-difficult, early assignment

- has helped him in his current CEO role.
- Serving as Secretary to the Board's Bonus & Salary Committee, a collateral duty which Tom Murphy performed for years.
- Developing for the CEO (and others) a monthly estimate of competitors' earnings and an annual assessment of their capabilities, which I did under Roger Smith's watchful eye for consumption by Fred Donner, Jim Roche and Dick Gerstenberg, among other readers.
- Preparing the Chairman for the rigors of the annual meeting of stockholders, which as the GM-related controversies of the 1960s and 1970s heated up became highly contentious affairs and near-marathons. Roger Smith and Tom Murphy did this for the Chairmen they served, and others in the office, in turn, prepared these two officers in later decades as they presided over stockholder meetings.

And so, when I entered the office in 1962 it was an exciting, fascinating place engaged in assignments relating to the court-ordered divestiture of DuPont's holdings of GM stock, the sale of GM's half-interest (with Standard Oil of New Jersey) in Ethyl Corporation, editorial completion of Sloan's My Years With General Motors, and the financing of the huge new car assembly operations in Fremont, California - now the NUMMI joint venture with Toyota - and in Bochum, Germany. Assignment to T.O.-N.Y. was, in effect, a post-graduate education in corporate finance that offered on the fly a highly unusual view of a near-unique institution.

Notwithstanding this lofty perch and the substantive impact of our daily assignments, there was a pervasively negative process aspect that accompanied the interesting tasks. The office was loaded with enormous quantities of financial pick-and-shovel work. The analysts — working in large, open areas dubbed "bullpens" — dealt with massive amounts of detail each day (and night). They often hated this regimen, which drove many analysts - including Jack Smith — to describe themselves at times with gallows humor as "grunts" as the jargon of the Vietnam-era army infantry wafted into the office. Because of the office's "clients" - the Board and an internal senior executive readership with highly demanding standards — the work

style of the office (and its pursuit of all viable options and alternatives for decision-making) came to be known as "pulverization" and analysis. Jim Roche, now age 92, still uses the descriptor "pulverize," but notes that as Chairman he was grateful to have all the pieces before him when making decisions. This pursuit of the grail of completeness was accompanied by a rigorous insistence that — as at *The New Yorker* magazine — all statements of fact in written work be independently verified (with accompanying "check" mark by an analyst other than the author), and that all such work even drafts — be proofed by two analysts reading aloud to one another. Tom Murphy developed into the office's premier proofreader; he personally went over all of the galleys of Sloan's My Years With General Motors before Doubleday published the book in 1964. Tom may still circle typos in correspondence and reports as he did while GM's CEO during 1974-1980.

The editorial behavior of the office hierarchy — incessant critiquing ("commenting") and rewriting that drove analysts to dub one Assistant Treasurer (Franklin H. LaRowe) with the thinly veiled nickname "Maury Penman" — created what one office wag described (with humor tinged by heartburn) as "the best-written files in the world."

There was a certain arbitrariness and rigidity (as well as intensity) to all of this — largely rooted in the discipline and traditions of the 1920s and 1930s. And so throughout my 10 years in New York, and probably even today, General Motors spells the word "employee" with only one "e" at the end — although incredibly if the reference was to GM of Canada's workforce, two "e"s were required. GM was never self-described as a "company" — which actually had been its legal description in the 1910s — but rather was to be referred to as "the Corporation" with the "c" always capitalized. Unlike the traditional usage of The New York Times, "General Motors Corporation" was never to be preceded by the word "the."9

Because of the dual New York - Detroit character of the company's headquarters and the demands of mail flow between the two offices, what also accompanied this rigorous, highly competitive, crisis-oriented work style was a nocturnal, sort of iron-man routine that also became a tradition. During one

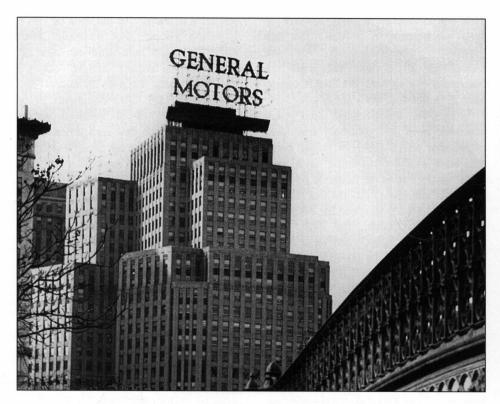


Fig. 3 - 1775 Broadway: T.O.-N.Y.'s New York office until 1968

evening in November, 1965, Howard S. Stein, currently a dignified, senior officer of Citibank, crashed through the plate glass door of the T.O.-N.Y. mailroom in a frenetic last-minute attempt to stuff an assignment into the overnight "pouch" leaving for Detroit. This was a feat that sent Stein bleeding to Roosevelt Hospital's emergency room while drawing dismayed (but approving) chuckles from Messrs. Donner, Murphy, and Roger Smith as they heard of the incident. During a three-year period in the early 1970s, the ten financial analysts in the section that I led — the staff for the Board's Bonus & Salary Committee arrived at their homes in three different states on average at 10:30 p.m.

For many analysts, the rigors of this scene — now largely changed became too much, and a number of good people — those on the list above — left. One man, who stayed and became a GM subsidiary president, likened the regimen to Marine Corps boot camp with a veneer of graduate school applied. For those analysts that stayed, the attractions were the camaraderie of very talented, highly motivated peers; and proximity to leaders, all of whom were able and some (but not all) of whom were also deeply caring and inspirational in an unpretentious way. In the latter category, the office (and then much of the rest of GM) came to view

Dick Gerstenberg and Tom Murphy as many in the Army of Northern Virginia earlier viewed Robert E. Lee. With time, a T.O.-N.Y. tradition of upward mobility became one of the most powerful motivators. John Finnegan, the current Chairman of GMAC (and former corporate Treasurer), notes that such is still the case.

For those who survived the Treasurer's Office and then moved out and up elsewhere within GM, one of the lubricants that made these atmospherics bearable was a pervasive (but largely subterranean) sense of humor that sprang up in unpredictable ways in the form of pranks and lampoonery. Many senior executives bore office nicknames of which they were largely unaware. A socially acceptable format for venting this behavior was often through the chart presentations devised not for Board meetings but rather for use at parties honoring individuals retiring transferring to Detroit assignments. J. J. MacDonald, a 29-year veteran of the office who ultimately became President of GM's Motors Insurance Corporation, was a highly creative, energetic man who frequently served as agent provocateur arranging such celebrations. MacDonald's forte was delivering a sort of organizational "hot-foot" to his bosses publicly, such as with one memorable

slide for a retirement party featuring a huge photograph of a frankfurter bun partially enveloping all but the extremities of a dead fish with the accompanying caption: "If Fred [Donner] says it's a hot dog, it's a hot dog!"

Over the decades, then, what emerged from this unusual New York experience was a group of bright, welleducated analysts recruited with care from multiple sources: first-rate business schools, the best of the divisional accounting department, and the corporate Comptroller's Staff. All six GM Chairmen that I interviewed emphasized the positive impact of this high-standard recruiting focus. Once hired or transferred to New York, these analysts were led by people with extremely high standards to work on a series of complex (as well as mundane) problems that increasingly took on a general as well as financial character. It was work that brought even relatively junior analysts in close proximity to many of the company's top leaders. a phenomenon that beneficiaries called "visibility." Tom Murphy notes that over the years these leaders — starting with Sloan — viewed Finance as a full partner to discussions and decision-making in the enterprise rather than as just a staff function — a point of view and role that ran to the New Yorkers' advantage.

These people had energy and inquiring minds, and they developed communication skills. Jack Smith, Bob Stempel and each of their four living predecessors as Chairman/CEO comment on the helpfulness and can-do attitude of the T.O.-N.Y. group and its willingness to take on, as Jim Roche phrases it, "darn near anything." And so they did. And in the process, they became leaders with great influence on GM. (As the company experienced severe marketing, operating, and financial problems — even crises in the late 1980s and into the 1990s, the value of this influence was debated, often emotionally, both inside and outside General Motors.)10

Over the years, the New York Treasurer's Office has changed in some ways but remains unaltered in still others. I should note for balance that at times there were also less attractive atmospheric aspects of the place that are now largely (but not entirely) gone. This style may not have served constructive business

purposes, especially in the eyes of GM's operating people. For example, both Roger Smith and Jack Smith comment on the negative impact of the office's traditional work regimen on family life. One retired GM CEO comments on a "killer style"11 of competitive, interpersonal behavior that sometimes drove staff analysts to seek the fatal flaw rather than constructive answers in line (divisional) proposals or even in the work of a sister staff organization, such as the corporate Comptroller's Staff in Detroit. Consequently, relations with the Comptroller's Staff were not always of a team character, which later negatively impacted (or at least delayed) the ability of some New Yorkers to be considered for transfer to badly-needed divisional accounting assignments. T.O.-N.Y.'s relations with leaders of the huge — 200,000-person — Overseas Division, the headquarters of which were co-located with T.O.-N.Y., were even worse than with the accountants during the 1960s.12 One retired Chairman (who came up through Engineering in the car divisions) notes that in the 1960s there was an unwillingness of

the general manager to whom he reported to have the division share data with the Treasurer's Office other than through him out of suspicion as to how it would later be presented to the Board.

Arguably, the office's geographical detachment from the domestic divisions and Detroit may have aggravated some of these tensions, although Tom Murphy and Dick Gerstenberg believe that the separation had some real intellectual advantages in terms of fostering objectivity, clarity of thinking, and a corporate-wide perspective on problems at some distance from, say, the pressures of a crisis in the Midwest. Other observers take the position that remoteness probably did not help still other CEOs to understand company's Marketing, Manufacturing, and Engineering workforce (and their work), very little of which was near New York.

Finally, it could be argued that over the years as the Treasurer's Office made its own luck, grew in stature and influence, and seeded other staff functions

— like Public Relations, Personnel,



Fig. 4 - 767 Fifth Avenue, New York: The General Motors Building

Marketing, Information Systems, and Product Planning — with its surplus talent, T.O.-N.Y. somewhat overshadowed these groups. Such dominance may have made the company's staff apparatus more efficient overall, but I believe that the product unintentionally became undesirably one-dimensional in the process. I view GM's external recruitment in the mid-1990s for vice presidents to run Marketing, Information Systems, and Communications to be a recognition of this experiential imbalance and an attempt to redress it.

Today, GM's overall presence in New York is a mere shadow of what it used to be. The GM Building is no longer owned by General Motors - it has been sold repeatedly since the cash crises of the late 1980s — and Board meetings are now held in the Detroit area - sometimes in Ford's home town of Dearborn rather than in New York. With repeated headcount reductions during GM's times of troubles, the Treasurer's Office, like much of GM, is smaller than it used to be. Some of the office's functions have been outsourced, while others - like that of the executive compensation responsibility and the secretaryship of the related Board committee - have moved to Detroit and are no longer under the jurisdiction of the Finance function, although they are led by a T.O.-N.Y. alumnus.

Nonetheless, Jack Smith emphasizes to me that GM still has a Treasurer's Office in New York (as well as in Brussels and Singapore), that it is likely to remain in Manhattan in some fashion, and that it is still an extraordinary developer of talent for GM quite unlike any other part of the company. Smith also comments that the office is now far more team-oriented, less involved with nontreasury functions, and far closer to the operations people — like Delphi Systems — as it helps them to sell and buy businesses and to form external strategic alliances around the world. Jack Smith notes that the era of long tours of duty in the New York office is over. He was assigned there for 10 years (as was I), Tom Murphy for almost 30 years, and in some ways Fred Donner never really left the place, even after he retired in 1967. The current thrust at GM Finance is to get the top talent out of New York and into operating-related assignments — often internationally - much more rapidly and earlier in their career than the decades it took to send Jack Smith from New York and Detroit to GM of Canada and then to GM Europe in the mid-1980s. Such has been the recent developmental history of Vice Presidents Burns, Dawes, and Henderson, for example.

In a way, Jack Smith's job history and those of his most senior former New York protégés with international operating experience, Lou Hughes and Rick Wagoner are more apt to be the look of the future than those of Fred Donner, Tom Murphy, or Roger Smith. The trick will be to ensure that as an institution GM is able to team these Finance backgrounds with equally bright, motivated women and men sourced from Engineering, Marketing. Operations disciplines.13 In the past two years Jack Smith has launched a "GM University" and even intends to teach a course there in — of all subjects — GM's history. It will be fascinating to see in just what way he succeeds, and if "GMU" becomes as influential in the 21st Century as the New York Treasurer's Office, in its own productive way, has been since World War I as a school for future Chairmen and CEOs, among other senior leaders.

NOTES

- For a description of the GE Internal Audit
 Staff and its impact on that company —
 remarkably parallel to GM's T.O.-N.Y.
 during the same post-W.W.I period see
 Ronald G. Greenwood, <u>Managerial</u>
 <u>Decentralization</u>, a Study of the General
 <u>Electric Philosophy</u> (Easton: Hive Publishing Co., 1982). For further such
 parallels between GM and GE, see Albert
 Churella, <u>From Steam to Diesel</u> (Princeton
 Univ. Press, 1998).
- 2. For the most recent description of the origins and early activities of what became the GM Design Staff, see Michael Lamm "The Earl of Detroit," American Heritage of Invention & Technology, 14, No. 2 (Fall 1998), 10 - 21. For decades, the GM Financial Staff has consisted primarily of the organizations reporting to the corporate Treasurer, Comptroller, and General (internal) Auditor. The Comptroller and his staff have always been based in Detroit; the Treasurer's staff has been split — as has GM's corporate headquarters itself between offices in New York and Detroit, with the New York office as the larger, dominant component. Depending on the company's substantive and ceremonial

- needs, GM's Treasurer has alternated between a residential base in what has come to be labeled Detroit-T.O. or T.O.-N.Y.
- 3. The closest (and most recent) study to a GM history is a 34-year-old memoir, Alfred P. Sloan, Jr., My Years With General Motors (New York: Doubleday, 1964), publication of which was delayed for years by internal objections from GM's Legal Staff, which was not anxious to release material about the company's decisions or decision-making process at a time when GM faced multiple federal antitrust/grand jury proceedings over its market share for railroad locomotives, offhighway earthmoving equipment, and automobiles. The deadening impact of these legal objections and a related siege mentality has lasted for decades, although the current Chairman and CEO, John F. Smith, Jr., has commissioned a company history of sorts - now in the research phase — that is to pick up the GM story where Sloan left it. This internal history will be quite different than those written and published for Ford Motor Company and DuPont by Pulitzer Prize winners Allan Nevins and Alfred D. Chandler, Jr.

Readers interested in governance over the years might consult two independent studies: Charles W. Cheape, Strictly Business, Walter Carpenter At DuPont and General Motors (Baltimore: Johns Hopkins University Press, 1995); and Robert A. Nitschke, The Legal Staff of General Motors Corporation 1920-1947; Its Origins and First General Counsel, John Thomas Smith (Detroit: n.p., 1989). Over the years, remarkably few personal memoirs (other than the 1964 Sloan reminiscences) have surfaced from the GM executive group. Three such narratives (of widely-varying character) by executives in the Communications, Personnel, and Finance/International functions are, respectively: Alvie L. Smith, Innovative Employee Communications: New Approaches to Improving Trust, Teamwork and Performance (Engelwood Cliffs: Prentice Hall, 1990); Victor M. Zink, The People Side of the Thing (Gaylord: n.p., 1991); and Louis H. Wilking, Reflections of An Innocent Abroad (Ann Arbor: Cushing-Malloy, 1992). See also Ivan L. Wiles, "Life Without General Motors", Fortune, October 1959, 126-27 and 172, an account by GM's Executive Vice President - Dealer Relations, after his 1957 early retirement following a cancer scare.

One of the funniest (but difficult to find) such accounts is a thinly-disguised, tongue-in-cheek account of GM and the leaders of its international organization during 1921-35 by the deceased personnel director of the old GM Overseas Operations Division, William Harvey, Jr., who, while recovering from an illness, wrote Compte Rendu (n.p., 1938) under the pen name "59." Among the oddest is J. Patrick Wright, On a Clear Day, You Can See General Motors (New York: Avon, 1980), a book believed by many people to have been a collaboration by Wright, a professional writer, and the controversial John Z. DeLorean, who had earlier resigned as GM's Vice President - Car & Truck Group. The recently published memoirs of Robert A. Lutz, Chrysler's retired vice chairman (Guts: The Seven Laws of Business That Made Chrysler the World's Hottest Car Company [New York: Wiley, 1998]), do not cover Lutz's experience in New York with GM's Overseas Division during the 1960s.

For a discussion of this paucity of GM insider accounts, see William P. MacKinnon, "Of Sieges, Fortresses, and Corporate Bonfires: The Lawyer As Archivist" (unpublished paper for the September, 1989 meeting of Midwest Archives Conference, Lansing, Michigan). See also Appendix A, as well as William Safire's Op-Ed essay "The Rest is History. All Insiders Should Do Their Duty," *The New York Times*, July 6, 1998, A15.

- 4. A seventh living executive, John G. Smale, is a Director of GM and was formerly Chairman of the Board, but was never its employee or CEO. Although he has been on GM's Board for more than 15 years and must have great insight into T.O.-N.Y. and its "product," Mr. Smale declined to be interviewed for this article. Interviews with the six retired and active Chairmen/CEOs were as follows:
 - James M. Roche, in-person interview, August 19, 1996.
 - Richard C. Gerstenberg, in-person interviews, August 20, 1996, May 28, 1998, and July 23, 1998.
 - Thomas A. Murphy, telephonic interviews August 16 and 19, 1996; letters to author, August 23 and September 18, 1996.
 - Roger B. Smith, telephonic interview, August 20, 1996.
 - Robert C. Stempel, in-person interview, August 27, 1996.
 - John F. Smith, Jr., telephonic

- interview, August 22, 1996; letter to author, October 17, 1996.
- Rickenbacker left GM's New York office in 1932 rather than accompany General Aviation to Baltimore when that organization moved.
- 6. An account of Stettinius' extraordinary business and cabinet career, including a brief description of his GM years, appears in Charles S. Ludwig, "Edward Riley Stettinius, Jr.: Businessman in Service to His Country" (unpublished doctoral dissertation, Arizona State University, Tempe, 1995). See also Townsend Hoopes and Douglas Brinkley, FDR and the Creation of the U.N. (New Haven: Yale University Press, 1996).
 - In his own way, Ernest R. Breech's experiences were nearly as varied as Stettinius'. Entering GM in 1925, when General Motors acquired his employer, Breech became General Assistant Treasurer in T.O.-N.Y. in 1929, and in the early 1930s began a long assignment as leader of GM's varied manufacturing and operating businesses. In 1946, while President of Bendix Aviation Corporation, Breech recruited to be Executive Vice President of Ford Motor Company, whose Chairman he became nine years later. Following retirement from Ford in 1960, Mr. Breech became Chairman of TWA, then (as now) a deeply troubled airline. Ford Motor Co. press release, December 15, 1966. Lane Dwinnell's commercial and governmental career is summarized in his obituary, The Union Leader [Manchester, N.H.], March 28, 1997.
- 7. See Donaldson Brown, "Pricing Policy in Relation to Financial Control," Management and Administration, 7, Nos. 2-4 (February-April, 1924). By the 1950s these articles had become embarrassingly controversial in ways not foreseen by Brown and GM and had become talking points in both congressional hearings on so-called "administered" automotive prices and in the UAW's labor negotiations with GM. In August, 1961 the author, then a Harvard graduate student, was denied a copy of these published articles by the GM Comptroller's Staff ("too sensitive") but was easily able to obtain them from the UAW headquarters at Solidarity House, which had reprinted the articles together with a related congressional report.
- Jack Smith, a native of Massachusetts, tells an amusing story of his initial refusal of an offer by Roger Smith to transfer from the

- B-O-P Division's Framingham assembly plant to T.O.-N.Y. After a look at GM's Internal Audit Staff in Detroit, Smith reconsidered and accepted the New York assignment.
- If young T.O.-N.Y. analysts hated and ridiculed this arbitrariness (especially when they first arrived in the office), outsiders who became aware of the tradition were sometimes appalled. For example, in early 1997 Douglas D. Paul, an automotive management consultant from Short Hills, New Jersey, wrote to the editor of Automotive News as follows: "Cash management, debt/equity issuing, capital planning, excessive proofreading and spelling employee with only one "e" may all be important, but they are not the core competencies of successful auto companies." Automotive News, January 6. 1997, 12 and 14.
- 10. For dissenting views on the value of T.O.-N.Y.'s impact on GM's effectiveness, see notes 9 and 13 as well as Appendix B, which include the comments of several retired GM officers with experience at U.S. car divisions, corporate staffs, and international operations.
- 11. One T.O.-N.Y. alumnus, now a GM Executive Vice President, bears the internal nickname "Mad-Dog." Compare the tone of this sobriquet to Dick Gerstenberg's self-assumed nickname decades earlier, "The Old Bookkeeper."
- 12. Among the most fascinating (but destructive) such clashes that the author observed were during 1963-64. They involved attempts by a strong-willed Robert A. Lutz (then a manager in GMOOD's Forward Planning Department and subsequently a Vice President of BMW and Ford as well as Vice Chairman of Chrysler Corporation) to send capital appropriation requests to the Board's Finance Committee via Roger Smith (then T.O.-N.Y.'s Director of Financial Analysis and subsequently Chairman/CEO).
- 13. At a time when GM's share of the U.S. car market has dropped alarmingly at times hovering around or below 30% in the late 1990s none of the six members of the President's Council has a Marketing background, and only one has a careerlong exposure to Operations. In early 1997 the debate over senior managerial backgrounds at GM spilled into a heated public exchange in the pages of Ward's Auto World triggered by columnist Jerry Flint's piece titled "What GM Needs is a 'Car Guy'," a pointed commentary on

GM's loss of U.S. market share and a perceived lack of seasoned Marketing/Operations/Engineering executives vis-a-vis Ford and Chrysler. Interpreting Flint's column as an attack on the background and performance of NAO President G. Richard Wagoner, Jr., three of Wagoner's five colleagues on the President's Council (and two other active or recently retired senior GM executives) wrote scathing letters to Ward's denouncing Flint's judgment - in total four T.O.-N.Y. alumni were involved. WAW, January, 1997, 17 and March, 1997,

15 and 16. With GM's devastating strike during the spring and summer of 1998, these criticisms welled up again. See Kathleen Kerwin, "GM: It's Time to Face the Future," *Business Week*, July 27, 1998, 26-28. In this scathing piece, Kerwin comments: "Smith's team – disparaged by Motown critics as four bean-counters and a lawyer – continue to do what they do best: fine-tune the balance sheet and reshuffle the deck chairs on a dated organization chart."

It will be interesting to see wether the subsequent GM organization changes

announced October 6, 1998 — including Wagoner's promotion to be the company's President, Chief Operating Officer, and a Director, and marketing chieftain Ronald L. Zarrella's promotion to succeeded him at what used to be NAO — will resolve or reawaken this debate over preparation, performance, and executive background. For what may be an early indicator see editorial ("GM Reorg: Where is the Car Guy?"), Automotive News, October 12, 1998, 12.

Appendix A

EXCERPTS FROM 9/18/96 UNPUBLISHED LETTER FROM THOMAS A. MURPHY TO WILLIAM P. MacKINNON

"Dear Bill:

whether your [9/6/96 SAH] audience pursued your "invitation" to discuss the reasons why there is no "reasonably current history of the company" — I might have inquired if I had been present. My limited experience with Mr. Sloan's book [My Years With General Motors] convinced me that such an undertaking was not a very good idea. At one time, as I recall, someone in GM Research was reportedly working on such a history, but

I believe it died a natural death. I also recall that at the time of GM's [1983] 75th anniversary, [Public Relations Vice President] Jack McNulty was pursuing the idea of having such a history prepared — I told him that if it were done, I would suggest putting it on the shelf, and publishing it at the time of the 100th. Incidentally, did you ever read [former Vice President and Associate General Counsel] Bob Nitschke's history of the early years of the GM Legal Staff [see note 3]? He did a fine job, and had

intended to do a follow up on the [Vice President and General Counsel Henry M.] Hogan years, but has never been able to do it.

[CEO] Jack Smith's idea of developing a 'GM University' is an interesting one — and if it materializes, I would like to take his course in GM's history. In its preparation, I can think of none better equipped to lend assistance than yourself — and after reading your [SAH] talk, perhaps Jack will see fit to give you that assignment."

Appendix B

COMMENTS QUESTIONING THE IMPACT OF EXECUTIVES WITH T.O.-N.Y. BACKGROUNDS ON GM'S PERFORMANCE

Unpublished Letters to William P. MacKinnon from Retired GM Officers

January 4, 1997
 Letter From a Former Car Division
 Vice President and General Manager,
 Who Also Was a Central Office Staff
 Vice President:

"Dear Bill,

Thank you for the copy of your [9/6/96 SAH] talk on the New York Treasurer's Office. I have read it a number of times. You would be either startled or pleased by how thoroughly it is high-lighted, underlined and marginally noted. It looks somewhat like a draft of a Staff V.P.'s Board presentation after it had been through the N.Y. Treasurer's Office! I don't think of myself as a foe of the NYTO, but I know that I am no fan either.

I don't have any trouble believing that many talented people have gone through the NYTO, but I also feel that some of them were given enormous opportunities in GM and then proceeded to fail in their responsibilities. If the NYTO was so good at recruiting and training, why did some of their graduates fail so miserably? I believe it was because some people are better than others whether they are a product of the NYTO or any other part of GM.

Some examples I can think of:
(a) [Chairman "A"] A truly fine human being who fell short of understanding what the business of GM was. Under his watch, GM missed the boat at a critical time in its history. And he must take the responsibility for naming ["B"] Chairman in spite of his demonstrated shortcomings in prior assignments. Apparently [Chairman "A"'s] NYTO training did not prepare him to judge leadership qualities.

(b) [Chairman "B"'s] brilliant mind was more than offset by his total lack of leadership qualities. The NYTO did not prepare ["B"] to lead GM and may have even been responsible for the poor leadership qualities he demonstrated. (c) [Executive VP "C"], another brilliant mind that was unbalanced by a complete lack of people and leadership skills. Why did the NYTO fail ["C"]? (d) [Executive VP ["D"], bagman for Donner, fast-tracker all the way. The heir apparent to [Chairman "B"]. And he never picked up the ball. He blew a silver spoon opportunity. Why did the NYTO fail him?

I guess that I always bridled when someone was described as 'elite.' Probably because I knew that term could never be applied to me, but more so because the best managers and leaders in my opinion tended to be generalists. [Executive VP "E"] and (maybe) [Chairman "F"] are examples of NYTO

Fall 1998

grads whose generalist qualities survived.

Other than [Chairman "F"] and [Executive VP "G"], I really do not know any of the NYTO grads at the top of GM today. But the fact that there is a concentration of them bothers me the same way I was uncomfortable with the concentration of [General Motors Institute] grads in top positions. Somehow, it seems incestuous to me.

The failure of [Chairman "H"] and [President "I"] to deliver will probably keep Financial people in the top jobs for a few generations.

Maybe I'm just jealous of the NYTO guys. I know they worked terrible hours. But they knew they were elite and they were given exposure and opportunity unheard of elsewhere in GM. Yet somehow I think that the best of the grads made it because they were good and the failures because they just didn't have it and their time at the NYTO had little to do with it. Financial people were always being sent out for 'operational' experience, but I never heard of a sharp, young operational person being sent to the NYTO for some experience!..."

December 1, 1996

Letter From a Former Internationalist With Extensive Experience As a Finance Manager As Well As Managing Director of Multiple Off-Shore Vehicle Operations:

"Dear Bill,

... Your interview on the Treasurer's Office was very interesting and, I'm sure, factual. During the midsixties as [____] for Overseas in N.Y. I had daily contact with [Chairman "A"], [Chairman "B"], and [Assistant Treasurer "J"] (as well as [Vice Chairman "K"]) and while totally impressed with the caliber of the T.O.'s personnel my reaction was that its influence was way out of line for a staff function (especially, its isolation from product development, dealers and customers) and that it was too far removed from the business we were in. At that time, one could be forgiven for assuming that GM was really an investment bank and not an industrial company.

A large part of GM's failure to

respond rapidly to changing market conditions was due to the training [Chairmen "L", "A", and "B"] (all able men) received in the T.O. Not one of them could tell you why a car design was good or bad, as unbelievable as that sounds.

[Chairman "F"] is by far the best chairman we have had since Sloan (although maybe not the most brilliant - but smart enough) because he is the only completely rounded businessman we have had since Sloan.

The new young leaders are all good but too heavily skewed toward Finance. In time this will change, especially if a four or six year tour at Opel [Adam Opel, A.G., GM's large German vehicle operation] is or becomes the key to advancements to the top posts. This is so, because Opel is the only operation where <u>all</u> business decisions are made under one roof..."

July 20, 1997

Letter From a Former Subsidiary President Who Was Also a T.O.-N.Y. Alumnus:

"Dear Bill.

nothing to contribute to your 'finishing up' efforts that in any way changes the story you have so ably put together. I wish you well and would like to acquire a finished copy of the magnus opus. I feel [that in your 9/6/96 SAH talk] you are much too gentle with [Chairman "B"] who practically ruined GM. He was trouble for me from the first day I met him right through until I retired from [_____]. What's with some [_____] people? Wouldn't you like to take him on as a project? I think I can sense why not."

Letter to Editor of *Automotive News*, Published January 6, 1997 Commenting On *AN*'s October 21, 1996 Excerpts From William P. MacKinnon's September 6, 1996 SAH Talk

"To the Editor:

I read with interest 'Cradle of Executives' (Oct. 21). While it may be one of the first histories of the General

Motors treasurer's office, the dominance and influence of Big 3 finance staffs has been documented in such books as On a Clear Day, You Can See General Motors and Iacocca.

I believe the article failed to explore the connection between the influence of that group and GM's decline in the 1980s. Poorly engineered cars like the Vega and X-body, badge engineering, massive and confusing reorganization and ineffective acquisitions like Electronic Data Systems and Hughes Aircraft all occurred during that group's rule.

Is it a mere coincidence that GM's product quality, market share and technological leadership all declined during that period?

Cash management, debt/equity issuing, capital planning, excessive proofreading and spelling employee with only one 'e' may all be important, but they are not the core competencies of successful auto companies.

Yes, there is a new generation of leadership at GM. But it is not Jack Smith, Rick Wagoner and Mike Losh that entirely represent it. Though they may be forward thinking, they cannot divorce themselves from the old [T.O.-N.Y.] cradle.

Fully implementing brand management (instigated by an outsider) and integrating product development with marketing strategy will drive GM's renaissance, if it occurs at all.

The new top management should be commended for letting change begin, but they must let the marketing, engineering and manufacturing people get to the top for it to be sustained. In the words of economist Alan McAdams, 'In order for there to be change, things have to be different afterward.'"

Douglas D. Paul [Automotive Management Consultant] Short Hills, NJ

60 Years of General Motors in Switzerland

by Ferdinand Hediger

When General Motors (Suisse) SA was founded in 1935 to assemble GM cars in Biel, a town of about 35,000 inhabitants, in Western Switzerland, it was a courageous decision. In the middle of a worldwide depression and rising political tensions in Europe the future did not look very bright. It has however to be considered that the Swiss Government in an effort to help creating new jobs and to cut unemployment which had reached an alarming level offered duty-privileges for car chassis to be completed by the various coachbuilding companies and for car parts to be assembled in Switzerland. This situation most certainly has been a strong incentive as the Swiss market at the time would hardly have made it worthwhile to set up a new assembly plant. In 1935, there were only 70,765 passenger cars in Switzerland. Annual sales amounted to about 9.000 cars. Fiat had been the market leader since the 1920's, closely followed by the total of the various GM marques.

Economic conditions favor new ventures

Before continuing with the development of the GM assembly plant in Biel, let us have a closer look at the economic situation and the measures taken by the Federal and Town Governments to improve it. Reducing production in all branches to match the dwindling demand resulted unemployment and a rapid erosion of prices and profits. First in manufacturing companies, soon the suppliers of raw materials, then prime supplies such as food, clothing etc. Bank crashes and increasing bankruptcies of companies followed. It was a vicious circle.

Whereas in 1928 unemployment in Switzerland totaled only 8,380 persons, the Depression took its toll, and by 1935 it had climbed to a staggering 82,410. This affected Biel where the many watch manufacturing companies were severely hit by the crisis. About every third worker in town did not have a job. Therefore the Town Council offered to put the ground as well as the construction of the buildings at the disposal of GM should they agree to

found a new company with an assembly line and the required infrastructure. The factory was rented to GM at 8 percent of the construction cost and for 5 years the new company would not have to pay any income tax.

The Swiss Government had the very difficult task to take measures in order to stop or at least soften the effects of the crisis. There were no national automobile manufacturers to protected, except for the builders of commercial vehicles, Saurer, Berna and FBW. Switzerland however numerous coachbuilding companies and manufacturers of auxiliary equipment, wheels, tires, instruments etc. The Federal Council decreed on August 25, 1931 that 40 percent of the import duty would be refunded on chassis cost provided the body was built in Switzerland. In the next ten years about 4,500 chassis received **Swiss** custom bodies. mainly convertibles. In 1933 the Government restricted importation of passenger cars and one year later a refund of 30 to 50 percent of the import-duty was offered for foreign chassis and spare-parts to be assembled in Switzerland and to be complemented with Swiss made auxiliary

equipment. The first company to take advantage of this opportunity was Saurer where some 675 Chrysler cars received their final assembly for the Swiss market in the next few months.

At the end of 1934, General Motors obtained a similar Federal permit granting considerable reimbursement on import-duty and valid for five years. There however was the restriction that no refund would be granted on commercial vehicles (pick-ups, trucks and buses) and no Swiss assembly was allowed. This obviously was to protect the Swiss manufacturers and to help them to survive difficult times. The Swiss marques dominated the heavy truck field with payload of 3 tons and more with some 85 percent market share. The last Swiss passenger car maker, Martini, went out of business in 1934 after years of struggling. The share of Swiss-made cars had continually dropped from 36 percent in 1910 to 15.5 percent in 1922 and to a negligible 1.7 percent in 1931.

This then were some of the conditions and circumstances prevailing in Switzerland when GM took the plunge and set up a modern small assembly plant in Biel (Fig. 1).



Fig. 1 - Headquarters of General Motors (Suisse) SA as it appeared in 1994.

Starting operation and arguments for buying GM (Suisse)-assembled cars.

In February 1936 the very first GM car assembled in Switzerland, a Buick Eight, rolled out of the new plant (Fig. 2). In the next 12 months about 1,600 cars were delivered. 320 new jobs were created in workshops and offices. Proudly the management of GM (Suisse)

labor and Swiss material.

A huge press for sheet-metal costing some 165,000 pre-war dollars was given as an example. This press was able to stamp the roof of an up-to-date all-steel body in about six minutes. Labor cost was only about four cents and with the mass production abroad, the stamped and shaped roof panel cost no more than if the

equipment was used: upholstery, wheels, tires from Firestone (Switzerland), pistons and engine parts from Nova Zurich, electric equipment from Scintilla, safety glass, carpets, batteries, instruments, clocks, lacquer etc. Typically, the manufacturing costs of a Chevrolet DeLuxe Touring Sedan (applicable to other models as well) could be divided in two parts: 35.1 percent of the value for material imported from America and 64.9 percent of the value for labor and Swiss contributions. The value for material imported from the United States never exceeded 40 percent.

Interestingly, there followed a rather detailed article with the intent to better inform customers about the negative result of a common practice in the automobile trade. Buyers should be aware of the fact that prices of most marques except GM - were too high in order to enable offering more than a fair market value for the trade-in of the old car.

What made the Biel assembly even more attractive was the fact that the Swiss currency had declined in value. The more expensive dollars were transferred abroad only for about 35 percent of the car's value. This enabled GM to offer first models at very competitive prices.

GM offered a wide range of cars "for every purse and purpose," as Alfred Sloan once said. The 1937 range started with the economic Opel P4 coach selling for Fr. 2,700 [In 1937, there were approximately 23 US cents to one Swiss franc. Thus, the Opel P4 sold for approximately \$621 - ed.]. The most expensive Swiss-assembled model was the Buick 90L seven-seater limousine at Fr. 18,500. LaSalle and Cadillac models were imported as complete cars, LaSalle at Fr. 13,500. Cadillac started with the



Fig. 2 - The first GM car assembled in Switzerland, a 1936 Buick.

SA stated in its 1937 brochure that every single car assembled had made available the money to support a whole family for over one month. In addition various subcontracting companies had obtained desperately needed orders.

The importance of the GM plant in Biel was explained as follows: It is in the interest of the Swiss economy to buy cars assembled in Switzerland, because:

1) The production of complete cars is not economically possible in Switzerland.

2) If complete cars are imported from abroad, a great amount of work for which Switzerland has the necessary skilled labor is lost. These workers must be employed and should not be left unoccupied. Swiss money should not be moved into foreign countries for work and material which can easily be provided in Switzerland.

3) The most advantageous solution is to assemble parts from abroad which cannot be manufactured economically in Switzerland and complement them with locally available

raw material had been procured in Switzerland.

In the nine months of operation in 1936, GM (Suisse) had paid about seven million Swiss francs for labor, rent, import duties, tools, fixtures, and Swissmade material, money that had not gone to foreign countries. In Biel unemployment had dropped by 19 percent. The following Swiss made material and

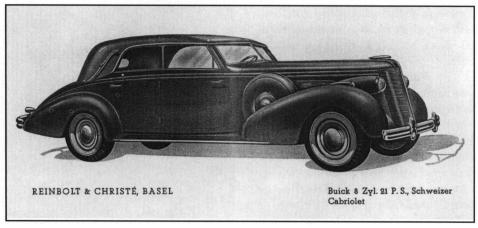


Fig. 3 - Handsome Swiss coachwork on a 1937 Buick chassis.

"60" Touring Sedan at Fr. 14,500, going up to the "85" Imperial 12 cylinder at Fr. 28,000. The brochure still mentioned the V16 with a price tag of over Fr. 50,000, but this apparently was no longer available. The most popular body styles were shown in pictures and the most remarkable technical advantages described in details such as the Fisher allsteel body, the double-ratio economic gear, the synchromesh gearbox and the independent front wheel suspension. For Swiss customers looking for a custommade convertible with four doors and suitable also for winter tours, there was a rather neat Buick with Reinbolt & Christé body (Fig. 3). All over Switzerland GM had established some 70 sales outlets and service workshops.

Comparison of GM cars with others

How did prices compare with GM's competitors? In 1937 the cheapest Chevrolet with a two-door coach body and the 3.5 L six cylinder engine sold for Fr. 5,990. This was excellent value for the money. At comparable prices the following cars could be had: Citroën 7 FWD sedan with 1.6 L four cylinder engine, Hillman Minx with the tiny 1.2L four, Peugeot 302 with a four cylinder of 1.8 L capacity - or the Opel Six with 2 L engine or the Vauxhall DX with 1.8 L engine, both also GM made.

What kept sales of Chevrolets down was the gasoline consumption. This was estimated at 12 to 15 litres per 100 km when the figures for the smaller European cars were 9 to 10 litres. The road tax which would amount in Zurich to Fr. 410 annually for the Chevrolet and to only Fr. 210 for the Citroën. Third party liability insurance which was already compulsory also would cost about Fr. 100 more for the Chevy.

In the upper class the standard Buick Eight sedan costing Fr. 9,900 compared favorably with the Chrysler Royal Six at Fr. 10,900, the Renault Nervasport, with straight eight engine at Fr. 11,700, the British Rover Sixteen with six cylinder engine of 2.1 litre capacity at Fr. 11,500, or the Studebaker Dictator Six at Fr. 11,200.

GM offered Opel, which also had a good selection of smaller capacity cars on the market. The new Kadett Coach sold at Fr. 3,700, and the popular Olympia Coach at Fr. 4,500. Both sported independent front wheel suspension,

hydraulic brakes and unit construction all steel bodies. Opel had a fabulous 41 percent market share in Germany and sold well in Switzerland too. Their competitors were DKW, Fiat 508, Peugeot 201 and the Renault Celtaquatre.

This all sounds very convincing. Did GM have the success it desired? The market was still not quite up to expectations and therefore the annual output was not doubled as planned in 1937 but only increased to slightly over 2,000 cars. The trend toward smaller and more economical cars became more pronounced. In 1939 GM (Suisse) sold 1,160 Opels challenging the marketleader Fiat which delivered 1,199 cars. Of the American marques, GM sold 157 Buicks, 4 Cadillacs, 588 Chevrolets, 57 Oldsmobiles and 49 Pontiacs totalling 855 cars assembled in Biel plus 101 cars imported from the USA. Out of the total annual sales of 8,630 cars, GM had a market share of 26.3 percent followed by Fiat with 13.9 percent, Ford with 12.8 percent, and Peugeot with 7.7 percent. The Chrysler group with partly Swissassembled cars managed 6.8 percent.

World War II and a new beginning

With the outbreak of the second World War, the whole venture of the GM assembly plant in Switzerland and its future became highly questionable. Not only were imports of parts becoming very difficult and rapidly impossible but the demand for new cars dropped to nearly zero over night. Private cars were called up by the Swiss Army and requisitioned to serve as transportation in the effort to defend the frontiers against the threat of Hitler's Germany and Mussolini's Italy. Gasoline was immediately reserved in first priority for the Army and small quantities strictly rationed for important and necessary transport tasks, for medical care, police, fire-brigades etc.

During the hostilities which fortunately never crossed the Swiss borders, the plant in Biel was partly rented by the Red Cross. In other halls and workshops gas generators (as a substitute for normal gasoline engines) military knapsacks and ammunition cases were manufactured and railroad stock repaired.

Car assembly was taken up again when the war ended. Based on the average sales in the late 1930's, GM estimated a total annual delivery of about 10,000 cars of all marques. The company had purchased the building from the town of Biel and had renovated it to be ready for re-starting assembly as soon as possible.

After a slow start in 1945/6 due to shortages of supplies caused by most of the car manufacturers switching back to civilian production, the demand for cars boomed beyond all expectations. In 1947 a total of 20,483 passenger cars were imported and/or assembled Switzerland. GM's share of the market was only 11.3 percent (1,724 Vauxhall and American cars assembled in Biel plus 590 complete imported cars.) There were no Opels yet as the works in Rüsselsheim were bombed and still in shambles. Slightly over 6,000 cars each were imported from the USA and Great Britain. Runner-up was France with 5,566 cars. Italy had dropped to fourth position with only 1,291 cars. There was also a newcomer or rather an old supplier turning up again: Czechoslovakia sold 321 cars in Switzerland.

The following year, 1948, 25,400 cars were imported. The number of passenger cars on the roads of Switzerland for the first time passed the magical 100,000 mark. By 1951 GM (Suisse) had come back in its stride by selling a total of 6,774 cars of which 3,213 were assembled in Biel. This was a market share of 22.7 percent. However, beginning in 1948 with small quantities but rapidly picking up and the market leader by 1952 was the famous Volkswagen Beetle out-selling by about 3 times the runner ups Opel and Fiat.

All Swiss-assembled GM cars received a metal badge on the radiator grille with a three-peaked mountain symbolizing the Swiss Alps and the "Montage Suisse" inscription. This became a sign of excellence. Soon the capacity of the plant in Biel could cope no longer with the booming demand. In 1955 therefore an enlargement program with investments of some 6 million Dollars was started. This, when completed in 1957, would allow the quantity of assembled GM cars to double.

Success and decline

Sales in Switzerland had risen to an average of some 60,000 cars annually in the years 1955 till 1958. In 1957 the 50,000th GM (Suisse) car left the assembly in Biel (Fig. 4). Four years later,



Fig. 4 - Note the "Montage Suisse" emblem in the grille of the 50,000th GM car assembled in Switzerland.

the 100,000th car was celebrated. In 1964 a total of 17,275 cars were assembled and delivered. GM's assembly capacity still could not fill the need of the market and

an increasing percentage of complete cars was imported from Germany and the USA. It is interesting to know that between 1947 and 1963 the markets of

Austria and Italy were also served by GM (Suisse) in Biel.

Due to agreements with other European nations, Switzerland had to abandon the preferential import taxation of car parts to be locally assembled. Therefore the necessary basis for an economical assembly of cars in Switzerland ceased to be important. In 1975, GM made the strategic decision to stop assembly in Switzerland. During the forty years from 1936 onward a total of 329,864 cars had been assembled in Biel (Fig. 5). GM (Suisse) SA then became general importer and distributor in Switzerland.

In 1992 the central spare parts stock was shut-down and in 1994 the company was re-named Opel (Suisse) SA. US-made GM cars are imported by a separate company. The statistics for 1994 show that Opel with a total of 40,771 cars representing a market share of 15 percent is undisputed market-leader. Runner-up is Volkswagen with 11.3 percent. The US made GM cars have dropped to a meager 2,352 cars sold, being beaten even by Hyundai and Suzuki.

So the short story of GM (Suisse) SA ends on a different note.

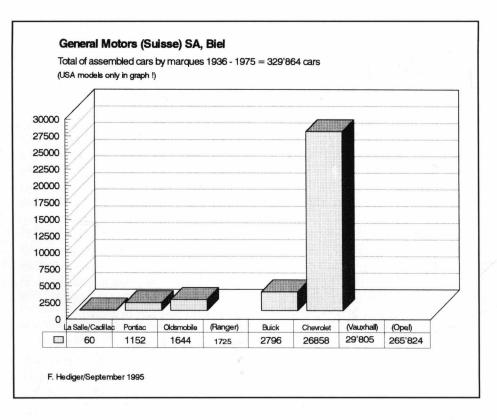
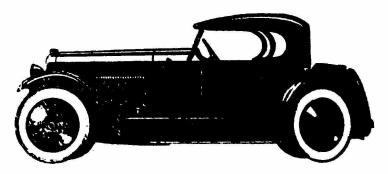


Fig. 5 - Breakdown by marque of GM's US cars assembled in Switzerland, 1936-1975.

TWO ASPECTS OF BUICK: David Buick's Missing Link by Keith Marvin

The First Dunbar Car is Shown Here This Week



The New Dunbar Car, Roadster Model.

The car was a revelation. It had good lines and it had class and it drew praise from its hundreds of admirers as it stood on display in the converted building which otherwise had been famed as the country's first condensed milk plant.

The spanking roadster was a Dunbar, first to bear the name of a completely new make. Its 500 or so admirers were those faithful with vision who had collectively scraped up \$55,000 to buy stock and make the new manufacturing venture a reality. They enthused with one another, drank lemonade, and admired the prototype which they hoped would lead to a badlyneeded business boom in the village of Walden, New York, a community of 5,000 in Orange County, about 80 miles northwest of Manhattan. And although they wouldn't know it until later, the first Dunbar would have vet distinction. It would be the last.

The time was August 1923. Plans for the production of the new automobile dovetailed with the closing down of a large hat factory and the phasing out of the Borden Milk operations. A major layoff of local labor was imminent.

The year before, there had come to Walden from God knows where, an advance guard telling the wondrous tale of a new car, a good car, and a relatively cheap car. The sachems of the company were looking for the right place to locate and implied that Walden looked most favorable to them for their center of operations. With a couple of the town's leading industries about to fold, the Dunbar almost was irresistible. Skepticism was swept aside. The idea of having an automobile company locate locally generated such enthusiasm that many citizens lost sight of Murphy's Ninth Law - "If the operation is successful, the investor is a visionary; if not. he's a sucker. And there are more suckers than visionaries."

There was something else going for Dunbar. It was true that businesses come and go without much notice, but in this case there was a name attached to it which had become a household word throughout the world. That word was Buick. This new manufacturer was the David Dunbar Buick Corporation.

Adam Ulrich of nearby Walkill recalled in 1980 that there didn't seem to be any promotional literature distributed at the time and that the sales pitch, such as it was, was by word of mouth. "We understood that the proposed new car had to be a winner as we were told it was backed by Buick," he explained. Backed

by Buick? Yes, but not by Buick Motor Co. of Flint, Michigan, which the promoter implied. Rather, it was backed by David D. Buick, the erstwhile genius who had formed the company to build the car bearing his name but who for many years had been out of that company and in and out of several unsuccessful business ventures. (Fig. 1)

The story of David D. Buick is one of the great tragedies of this country's pioneers in the automobile industry. Inventor of the process for attaching enamel to iron, he might well have become known as the father of the modern bathtub had he not invented a most successful valve-in-head engine shortly thereafter. Buick's mistake was in his decision to build a car around that engine — a car bearing his name.

Of the many things David Buick was and might have been, he was not a practical businessman. One William C. Durant entered the Buick company, an entrepreneur with plans. In the course of events Buick left the company, to go into other enterprises including oil and carburetors. But he lacked the Midas touch and failed at both ventures. He would dabble in Florida real estate with no better luck and end his days in 1928 as an instructor at the Chicago School of Trades.

Fall 1998 23

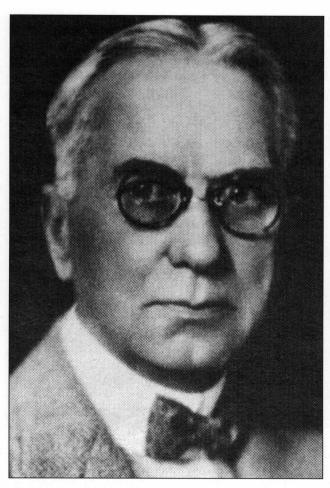


Fig. 1. David D. Buick

However, in 1920, David Buick gained control of the moribund Lorraine Motor Car Co. of Grand Rapids, Michigan. The Lorraine — before 1920, the Hackett — was a typical assembled car. In its two years or three years of activity, it probably completed 450 to 500 rather dull, adequate, undistinguished automobiles, the greater majority of them touring cars. They may have been good cars, but the company wasn't strong enough to weather the 1921 recession. Like so many other automobiles that year, the Lorraine died, and David Buick started looking around for something else to do.

For a man who had headed two automobile companies, it isn't hard to understand that he'd want to try another. What we don't know for fact is exactly when the idea of forming his own company became a reality. Neither can we be sure of the extent in which he was actively involved in its operations. Was he actually the brains of the business, or was he simply a front, placed at the head of the concern because of his name? We shall probably never know.

"When we learned that the

projected car would be made by the David Dunbar Buick Corporation," Adam Ulrich told me, "most of us assumed that there was a chap named David Dunbar who was heading up a company backed by the Buick people." This was a natural assumption and few if any Waldenites connected that Dunbar name with the father of the Buick car, at least not at Actually, David first. Dunbar Buick couldn't have used the Buick name again anyway. That belonged to the other car. So Dunbar it was.

By August 1922, the fat was in the fire. Those in charge felt that it was time to notify the automotive press of the future company and what is was up to. Accordingly, a terse item, devoid of either personnel location, appeared in Automobile Topics for August 12, 1922:

"David Dunbar Buick, who lent his name to the company since become so famous is organizing a company to produce what will be known as the Dunbar car. It is understood that negotiations are pending for the purchase of a plant. Production is expected to be begun, in five models, early next year. Financial plans are not shown as yet but it is understood that a capital of \$5,000,000 will be set upon. The project has been hatching for some time."

If the project had been "hatching for some time," we may assume that it began about the time the Lorraine laid an egg.

That is how the promoters of the David Dunbar Buick Corporation came to set up shop in Walden and such adjoining communities as Walkill, and started selling stock. Negotiations were under way for the leasing of the large brick complex owned by the Dairymen's League on today's Route 208 between Walden and Walkill. This structure, built in 1884, a center of local civic pride, had been the original processing plant for the Borden Company and was located next to the farm of the late John Gail Borden. During Prohibition it was a still, but when I saw it in 1980, it had been the home of the Central Slicing Company since 1942.

The David Dunbar Buick Corporation was incorporated in Delaware, and capitalized at \$5,000,000, consisting of 8 percent cumulative preferred stock of \$25 par value and 600,000 shares of common stock of no par value (Fig. 2). According to an announcement in *Automotive Industries*,



Fig. 2. Certificate for 40 Shares of Common Stock in the David Dunbar Buick Corporation, issued to Charles Ulrich on May 19, 1923. His son, Adam Ulrich, purchased 10 shares himself at \$5 per share as well as eight shares of Preferred Stock at \$25 a share.

Note David D. Buick's signature, lower right.

DAVID DUNBAR BUICK CORPORATION

MANUFACTURERS OF

PLANT WALDEN, N. Y.

DUNBAR MOTOR CARS

SUITE 1306-165 BROADWAY NEW YORK CITY

To our new Associates in The David Dunbar Buick Corporation:

At the request of the Management we are pleased to communicate with you and establish contact between you and our Committee. This Committee is composed of the original Security Holders of the Corporation and is assisting in the Administration of the affairs of our Company.

The readjustment of our affairs and the new plans and policies of the Management have our endorsement and complete approval. They are sound and progressive and we are enthused over the new designs to be produced. We can assure you of the integrity and character of the men back of this Corporation. There was a disturbing element associated, which has been eliminated.

The Management wishes to go into a large production of Dunbars starting early this year and to do so will require a substantial amount of additional capital. The Stockholders Committee has agreed to raise these funds among the Stockholders. The plan of syndicating this money will be extended to Stockholders exclusively. The Syndicate will be under the control of this Committee.

This Committee wishes to cooperate with the Officers and Directors to the fullest extent in order to assure early and substantial production. This will prove mutually beneficial and profitable. The plan developed is an excellent one and has been worked out in connection with the Banking arrangements for the future financing of the Corporation on a large scale.

The letter just sent you by the Corporation has the approval of this Committee. The information advanced is authentic. We are enthusiastic over the future of our Corporation and your cooperation and approval is invited. You will be accorded the same privileges in our plans as the original Stockholders. We will be glad to have you participate with us and have a part in building up our business to a highly successful degree. This Committee and the Management are working together to advance the Corporation's affairs as rapidly as possible. Two members of this Committee will serve on the Board of Directors. All information and reports sent out to Stockholders will be approved by this Committee.

In this Corporation, the Management has proven its good faith and progressive spirit by requesting this Committee to cooperate and approve its plan and policies for the benefit of the Stockholders. In many Corporations this spirit does not exist. We heartily endorse the present management and will continue to assist and cooperate with them in every possible manner. In near

future we will submit our Syndicate Plan for your approval and participation.

future proval

DUNBAR SPORT ROADSTER

Respectfully.
Stockholders Administration Committee.

Chairman.

Fig. 3. Undated corporate letter, probably early 1924, seeking further investments in the company.

the company offered the unsold portion of 100,000 shares of common stock at \$10 per share.

On February 1, 1923, an open meeting was held to hear an outline of plans presented by Harry C. Hoeft, secretary of the Buick Corporation. The chairman of the Advisory Board presided: L. F. MacGowen of Walden. The meeting was dutifully reported by the Walden *Citizen-Herald*.

Later that month, the community was honored with the august personage of Mr. Buick himself, who had come to supervise the purchase of the plant on George Washington's birthday. By then, stock sales were booming. It was time, the corporate brass decided, to treat the automotive press to updated information on the progress of the new business. As it turned out, this was the company's last press release.

As reported in the April 26, 1923 issue of Automotive Industries, the David Dunbar Buick Corporation, with headquarters at 25 West 43rd Street, New York City, had bought a plant at Walden, N.Y., and expected production to begin one month hence. Four models were projected with open cars listing "around \$1,100" and closed models at "about \$1,400." The release revealed that one car had already been built and that work was progressing on the other three. This was either wishful thinking or a downright fabrication. True, the roadster had been completed, of paramount importance to impress stockholders and potential investors. But it's unlikely that any work had been done on the other three.

"The new plant" the release continued "was purchased from the Dairymen's League, and has an appraised value of \$105,000 and has 70,000 sq. ft. of floor space."

The officers of the corporation were said to be Mr. Buick, president and general manager; J. L. Donohoe, vice president and treasurer; and Mr. Hoeft, secretary. The board of directors included the three officers and the following men, none of whom had any basic connection with the automobile industry: John Fraser of New York City, consulting engineer and formerly chief engineer of the Jones & Laughlin Steel Co. of Pittsburgh; Henry T. Sheldon of the Sherwin-Williams Co.; Ward E.

Pearson, vice president of the Union Bankers Corp. and president of the Pearson Engineering Corp.; and Frank W. Gilbert, president of the Pittsburgh Grinding Wheel Co. and of the Oriental Emery Co., Rochester, Pa.

The advisory board consisted of residents of the state of New York: Mr. MacGowen; Chester R. Didsbury of Walden, owner of the local theatre; George E. Montrose of Central Valley; George S. Weller of Newburgh; Holmes Vandewater of Poughkeepsie; and William Dick and J.J. O'Connor of Brooklyn. The final member was William Treat of Derby, Connecticut.

But "a month hence" came and went without the car entering production. We next hear of the company in August 1923. Presumably, in the meantime, the promoters promoted and the citizenry continued to avail themselves of the opportunity to buy shares in this wonderful new Buickbacked automobile.

But by mid-summer, company found it prudent to line the product up for the enlightenment of all those whose belief and confidence had made the whole thing possible. So a big reception was thrown out at the plant. The lone roadster was placed on display, making its first public appearance. Hundreds trooped to the site where the new car had been conceived and (still)born. As reported by the Citizen-Herald, the roadster was "a beautiful maroon with battleship red wheels" (whatever THAT meant). The public must have been reassured to read that "The engine works perfectly [and] the furnishings of the car were first class."

The car was taken into town and displayed on the streets for two days. "It can be driven at 70 miles per hour," exulted the paper, failing to note that most other similarly-constructed cars of the day could also perform this feat. A sketch of the Dunbar appeared on the first page of the Citizen-Herald on August 23, the same as the one at the head of this article. Efforts to locate an actual photo of the car have been for naught, but Adam Ulrich, who saw the car at the plant and in Walden, states that the sketch is accurate. We see a sharplooking roadster with California top, close-coupled trunk arrangement and spare wheel mounted aft. We also know that under the hood rested a Continental

L-head six, Model 8R, with a 3 3/8 inch x 4 1/2 inch bore and stroke, developing 52 brake horsepower at 3,000 rpm. The car had a wheelbase of 112 inches and 31 x 4.00 tires. Further specifications have not turned up and with a lack of promotional literature, it doesn't seem likely they will. It would be of more than passing interest to know who exactly designed and built the chic open body. It was ahead of its time and just might have been a winner.

But the David Dunbar Buick Corporation wasn't a winner and perhaps it never intended to be. At the reception, when the car was on display, Dunbar personnel announced that the factory would close for "retooling." Simple? Of course. If one expected any sort of production, retooling would be a prerequisite.

So the good folk of Walden and Walkill waited through the summer and fall. Finally, at the beginning of 1924, an undated letter on corporate headquarters stationery was addressed "to our new Associates in the David Dunbar Buick Corporation," telling of hopes to build "a large production of Dunbars starting early this year" (Fig. 3). Who William Dick was, other than "Chairman of the Stockholders Administration Committee," we don't know. Perhaps the new corporate address was only a mail drop. Presumably the mailing list consisted of the names of those who had bought into the Dunbar. I made a final trip to Walden and showed this letter to older residents who'd gotten bitten by their investment. Two recalled this follow-up. They were older and wiser, and Mr. Dick's scheme died aborning.

The fate of the sole Dunbar is anyone's guess. As far as I know, nothing remains of the operation except this letter, a few faded stock certificates, and notices in the local press. I hope the word "Dunbar" can still be seen on a beam in the plant, as I saw it there almost 20 years ago.

Harlow Curtice, Buick, and the 1948 Model You Never Saw

by Richard H. Stout

"Harlow Curtice has canceled the 1948 Buick! Last night he had a nightmare. He dreamt the car looked like the 1934 Chrysler Airflow. The 1947 model will run another year." This news flabbergasted us in General Motors Styling Section one midsummer morning, 1947, where I had recently started as an apprentice designer. What on earth was going on?

All America was waiting anxiously for the first totally new postwar dream cars, those wonderful cars-oftomorrow that rolled off the pages of popular magazines during the war years. The first postwar cars, welcome though they were, were old-hat, just facelifts of the 1942 models. Now at last, with the great moment at hand, Buick was jettisoning its all-new model. The tooling was complete, the car was ready; catalogue and advertising art work were in process. All-new 1948 Cadillacs and Oldsmobile 98s were going to appear with glamorous new bodies, while Buick would have the same 6-year old sheetmetal. Poor Buick.

The Division, under Harlow Curtice (Fig. 1), maintained the most aggressive product program in the industry. Beginning with the 1936 model,



Fig. 1 - Harlow H. Curtice, 1957



Fig. 2 - The proposed 1948 Buick

each year he came forth with an all new body series, higher horsepower, and razzle-dazzle of some sort to put the spotlight on Buick. He was determined to win. When he felt it necessary, canceling body programs or crash-programming whole new ones was also part of his modus operandi. Canceling the 1948 was symbolic of his incessant battle to always have the right product.

Throttled in its crib, the proposed 1948 Buick did indeed have a rounded front though surely not a bad one. (Fig. 2) Whether or not the nightmare story was true mattered not, the car was canceled. The revered Harlow Herbert Curtice, vice-president of General Motors Corporation and general manager of Buick Motor Division, ultimately viewed the proposed job as resembling the ill-fated Airflow Chrysler. Remember, the Airflow was just leaving production a mere 10 years before our story, and it would haunt the industry for years to come.

As time passed, we learned that

the front end was not considered sufficiently "Buick." It was not bold enough, it did not have "thrust." Buick was a "man's car." This meant it had to have a masculine front end, phallic overtones, with the hood especially important. Curtice and his staff had tried to learn to like this front but in the end it work. Buick management, especially Curtice, was adamant about keeping Buick in character. Year after year, mechanically and stylewise, they maintained strong consistency. The "Buick Look" was sacred. They pondered every styling decision with great care, always asking: Is it "Buick"? Every detail mattered. Series numbers were kept intact year after year: and series names were selected with meaning. Each new model had to be worthy of its predecessor. Week after week, year after year, the Division's double-page black and white ad spreads appeared in The Saturday Evening Post. Consistency contributed importantly to Buick's success. Buick personality and Buick character were meaningful. The

public knew and trusted Buick. Buick was like an old friend whether you owned one or not. In those days, people really would rather have a Buick.

At this time, streamlining was synonymous with modernism. Always, Buick sought to balance consistency with leadership. Sometimes in the name of progress, stretching a point was necessary. With the front end of the proposed '48, Buick was reaching out, attempting to see what it could live with. The appearance of streamlining was considered more important than actual streamlining. Functional streamlining is not truly effective until very high speeds beyond legal limits. True streamlining was not worth compromising the "look."

Who else in the industry, other than Harlow Curtice, would have the power, much less the guts, to cancel an entirely new model at the very last minute? Curtice was an "automobile man" par excellence. In the industry, the "automobile man" is the antithesis of the "financial man." Curtice, remarkably, was both. He had been comptroller of AC Spark Plub Division when he became general manager of Buick at 41 in October 1934. His first full line, the 1936 model, was planned meticulously. Since many former Buick owners were unable to afford Buicks during the early Depression years, Curtice created his new models to attract and welcome back this traditional group. Simultaneously, he courted young blood with spirited style and performance, and, yes, lower prices. Buick blended bold new styling with the existing hood lines dating from 1929. Traditional Buick features like valve-inhead engine, torque tube drive, and "sealed chassis" were retained and updated. A big, powerful new straight eight was added to the line, joining the small straight eight, new in 1934. Hydraulic brakes and the all-steel Turret Tops were added. Buick deemed all models "Pure Buicks." This meant the lowest price models had all the same basic Buick features as the most expensive models. "Pure Buick" was a meaningful term. In 1930, Buick introduced a lower-priced model called Marquette. It did not have the timehonored Buick features of valve-in-head, torque tube drive, or sealed chassis. Sales were disappointing and the line was dropped.

Every car line had its place, a reason. For 1936, each numbered series was given a name with meaning:

Series 40 SPECIAL "Pure Buick," special price 118" WB

Series 80 ROADMASTER Powerful, roadsize car 131" WB

Series 90 LIMITED Limited production, prestige 138" WB

The series system started in 1931, but the concept of a "worthy successor" (if produced) to each model dated back to 1911. Only once in the Curtice era was a series number changed. In 1940, the name "Roadmaster" was taken from Series 80 and given to the allnew Series 70. Series 80 became part of the Series 90 cars.

In 1937, a new "Buick Look" began. Curtice consistently spearheaded aggressive programs, new bodies on some series every year, higher and higher horsepowers until "world's highest" (165) for the years 1941/42, and even announcing custom Brunn bodies for 1941. Always some special excitement each year up to World War II. While all other GM cars had disc wheels with four slots for mounting chains, Curtice never allowed them on Buick, considering the slots ugly. He always outfitted his cars elegantly with chrome wheel trim rings . . . never any "economy" looking Buicks. He never built a brown car which he considered shabby.

In 1938, Buick gained fourth place in sales, an astounding feat for a car of this price class. The elementary laws of economics had been flagrantly violated. Buick, an upper middle-priced car, was right behind Chevrolet, Ford, and Plymouth! Pure logic should place Buick in 8th, 9th, 10th or lower, behind the cheaper Pontiac, Dodge, Studebaker, Oldsmobile. "Up where we hardly belong!" cooed Buick in a 1938 advertisement.

Buick management not only knew their own product philosophy, but saw themselves in corporate context. They clearly grasped their specific role in the overall General Motors picture. In the late 1930's, the hottest market research news was that women were the ultimate decision makers on what family car to buy. Harlow Curtice said, "Fine, we will build our cars for men." His rationale was

that other manufacturers would direct their appeal to women and leave the market all the more open for the man's car. Buick acquired an Auburn-Cord-Duesenberg flavor: high horsepower, rakish steering wheel angles, engineturned instrument panels with large round dials, a plethora of convertible coupes and sedans. Buick reeked sportiness, elegance, prestige. Even the lowest priced "Pure Buick" Specials shared the aristrocratic family glamour of the Roadmaster and Limiteds, a snobbish aura that Pontiac and Olds could not possess.

Juggling body programs was nothing new to Harlow Curtice. In the mid-1930s, GM became enraptured with marketing research, grandly promoting a project called "The Proving Ground of Public Opinion." The 1939 B-body resulted. It had high windows, splendid vision, "chair-high" seating, restrained chrome and grilles, simplified ornamentation, and wheelbases shortened to 120 inches. The public had voted for the "common sense" items but were not impressed when they saw the results. Curtice reacted quickly, and crashprogrammed the stylish 1940 C-body to run simultaneously with the carryover Bbody Special. The '40 C, patterned after the glamorous Cadillac 60 Special of 1938 (see cover), had been scheduled as the 1941 B-body. The crash program meant that the convertible coupes and sedans did not make production until midyear. Curtice scarcely trusted marketing research after that.

To further complicate body redesignation annals, the 1948 C-body slated for our ill-fated 1948 Buick, started life as a B-body. During World War II, GM was immersed in war production activities, with no chance for any head start on postwar automobiles. The B-body was to be first, the C-body next. Ultimately, time would not permit both, so the B-body design was adopted for the C-bodied Olds 98, Buick Super and Roadmaster, and Cadillacs. Wheelbases of the 1948/49 C-body models were three inches shorter than their predecessors.

I saw the full-sized plaster model of the original 1948 job as it was being removed from the Buick Studio. I assumed this memory would be the only record I would ever have of this car. I remembered the rounded hood and

softness around the headlights, and liked the scoops in the outboard sections of the grille. I felt Henri Lauve, Buick's Chief Designer, had done a good job. A few years ago, an article on artist Eric Valleau appeared in the *Michigan History Magazine*, and there it was, the long lost 1948 front end, a splendid rendering of the proposed Super Sedanet depicting Valleau's talent.

The 1947 C-body jobs, Roadmasters and Supers, were mainstays for the 1948 model year. Though old-hat, they were still splendidly handsome cars. Additionally, Buick scheduled a token number of Specials (the 1941 B-body jobs). In 1948, the industry adopted new fatter Air-Ride tires which gave a boost to the good looks of all these Buicks. "News" for Buick this year was the Dynaflow torque converter transmission for Roadmaster (sometimes reported as the reason Buick could not "afford" the new body). This was still a seller's market and Buick would have no problem selling everything it could build.

General Motors Styling Section was a fun, happy place to work. Early on, we were advised in a formal lecture: "You are Stylists, not Industrial Designers. Styling is fashion design. It is change for the sake of change. Good design is mandatory, but with the concept of constant "newness." Industrial Design is good design, but for less interesting products." We were taught that the duty of the stylist is to whet the public appetite, to intrigue, to induce the purchase of the newest of the new. This is not wasteful for consumers. Used cars live full and useful lives. Our duty was clear. Harley Earl, vice-president of Styling, had the power to see that fresh "looks" went into production.

Harley Jerome Earl did not ride with history. He made it. Nowadays,

marketing research, public opinion surveys, clinics, and the like determine new models. Non-automotive financial men cannot make a decision without reams of data, research, and endless surveys. "Trends" are sought and blindly followed. Earl and Curtice, as we know, shunned market research. They set the style and made the trend for others to follow. The public wants to be surprised. charmed, entertained. "Make 'em shout Hooray!" exclaimed Harley Earl one day as we were working on the 1954 C-Body. "Harleeeee, Harlowwww" sang Styling Section shop personnel working late nights on models for those Curtice-Earl crash programs.

Ned F. Nickles, a 7-year veteran in Styling Section, was summoned to take over as chief designer of Buick with the immediate task of removing the nightmare features of the ill-fated 1948 job and replacing them with a more "Buick Look" for the 1949 model year. Nick was one of GM's most talented designers. He had an uncanny ability to create new designs on a moment's notice. From memory, he could accurately draw nearly any car from the 1930s. He was a natural for the Buick team, especially now for this 1948 rework. How much to change? The hood panel will, of course, be redesigned to be bold, straight, and long in true Buick character. Fenders? A softness existed around the headlight area but a look of thrust can be gained with a fender-top chrome spear extending from paring light to front door cut. "Buick Look?" The grille was not bad, but with more Buick teeth, topped with a chrome header like the 1947/48, it will shout "Buick" a block away.

On his own 1948 Roadmaster convertible, Nick had put three "portholes" with flashing lights to simulate exhaust. Curtice, curious, asked

that the car be sent up to the Buick Studio. "A hit!" says Curtice, "let's put three of them on the Super and four on Roadmaster." "Three for jobs with the small engine, four for the big engine," says Nickles, "like the number of louvers on the 1940's."

Hood, grille, fender-top spear, ports . . . such were the changes made for 1949. Was it "Buick"? . . . was it "Buick"? Yes, it was "Buick," it was in character. The 1937 hood plateau was still there in modern form, the 1937 hubcaps and crest, the 1940 round dials, the 1942 grille "teeth" with the 1947 header, the 1946 hood ornament. And now the portholes. Curtis was delighted. Midyear, Nick would add the "Sweepspear" as another Buick identity item. Since the "Look" over the hood from the driver's seat was considered especially important, Nick added a second full size hood clay buck to the front of the instrument panel/seating buck. Management could now evaluate what the driver would see. Exterior or interior, the "Buick Look" was of paramount concern. (Fig. 3)

The "Buick Look" continued to dominate through the '57s. Harlow should have had a nightmare about the '58s, so disastrous that by '59 any semblance of the "Buick Look" was gone, along with the resonant old names. Welcome Le Sabre, Invicta, Electra! The careful planning, the detailed strategies, the meticulous "is it Buick?" attention of the years since 1936, none of it was there. This transition was bold, but crude and superficial. Buick never sustained fourth place again.

The Curtice/Earl saga was a great partnership in GM's history. One man's talent took over where the other left off. Buick had two decades "up where we hardly belong," while General Motors kept an eye on that 50 percent market line. In no small way, much of this remarkable success was the result of those two "automobile men." The 1948 Buick-you-never-saw was a typical example of the way Curtice could shake up the entire General Motors Corporation. He was determined to get things right. Earl delivered the goods. Is it "Buick?" Is it "Buick"? If we ever hear of those words again, we will know that something truly splendid is going to be coming our way.

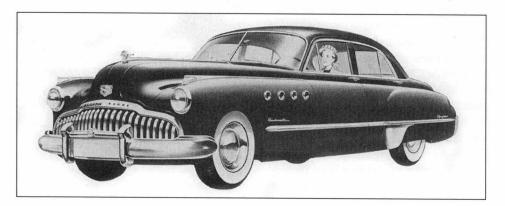


Fig. 3 - Now, there's a Buick! The '49.

THOSE ELUSIVE VEHICLES, CHAPTER IV: ASSOCIATIONS AND CLUBS

by Grace R. Brigham

Those early motorists needed help. All kinds of help. As soon as a horseless carriage ventured out of its birthing shop, the inventor would learn how quickly a smoky, noisy engine attracted the attention of watchers on the nearby roads.

Many policemen had discovered that it was considerably easier to nab a motorcar driver than to catch a poacher or a horse thief. This new sport, sanctioned by their officials, was doubly attractive to guardians of poorer communities. Car owners most likely were able to pay the hefty fines assessed for "frightening horses, threatening livestock, causing traffic tie-ups and inflicting obnoxious fumes and objectionable noises on the local citizenry."

Speed traps were becoming quite common. Limits could vary from state to state and county to county, from one city to the next, and, often within a community, from section to section. Understandably, a slower rate was required near schools and churches when they were in session, but one of the ordinances even required motorists to lower speed to not more than eight miles an hour when within half a mile of a post office. For vehicles approaching skittish horses and their frightened handlers, complete stops would be ordered.

Motoring magazines published accounts of the constant harassment and printed many letters from angry drivers about the situation. In 1903, editors of *Horseless Age* reported on the "oppressive regulations" of New Jersey, "an outrageous automobile bill" in Pennsylvania, "the obnoxious clauses of Bailey Bill" (New York) and "seemingly unjust persecution of automobile users and tyrannical regulations" throughout the country.

As each country was faced with the arrival of self-propelled vehicles, it enacted various laws to control them. Outdoing all others, Great Britain's notorious Red Flag Act not only restricted drivers but also its auto industry.

The laws tended to favor horses and their owners. These had been rulers

of the highways for centuries. Occasionally, however, the motor car owners managed to prevail when they insisted that speed limits as well as all other regulations should apply to both horse and to car.

Instead of fighting for their causes individually, case by case, in the courts, these motorists were beginning to realize that their best protection would be that provided by organizations devoted to their specific needs. A variety of clubs started up with plans of giving vehicle owners and drivers the informational, legal, mechanical, and protective help required to enable them to travel safely on the roads.

The First Clubs: Origins & Purposes

By 1900, there were automobile clubs in many countries. A list in The Automobile Magazine of August 1901 named two in Austria, seven in Belgium, 15 in France, 14 in Germany, four in Great Britain, one in Holland, two in Italy, two in Russia, one in Spain, one in Switzerland, and 23 in the United States. Some of these were combined cycle and motor clubs, like the Bicycle et Automobile Club de Lyon, France. According to Anthony Harding's book, Car Facts and Feats, the oldest motor club in the world was the Automobile Club de France. From the Paris-Bordeaux-Paris Race which it organized in June of 1895, the club and its sister organizations continued to be authorities on international motoring sports.

Another early one was the Motor Car Club organized in England in 1896. The next year the Automobile Club of Great Britain and Ireland was formed. In 1907, its name was changed to the Royal Automobile Club.

Numerous regional associations started up in the United States. Among the few which survived the early days was the Automobile Club of America. Soon after it was organized in 1899 the directors started working on legal matters affecting motorists, then on organizing speed trials to test the cars.

Their aim was to develop a national club with international connections. Correspondence was continually being exchanged between the major associations of many countries. Reports were given on events such as car shows and exhibits on industrial machinery, on the names and types of vehicles available and on the rules and regulations in a country or in a district.

The Automobile Club of America wasted no time in planning its own show which was to be held the next year in New York City. In fact, at their first general meeting one of their charter members, George F. Chamberlin, brought up the subject. They all realized that the United States was finally catching up with the European manufacturers in production and should be able to put on an impressive display.

The Club also started a library for storing the mass of information being collected. Up-dated information was kept on legal matters affecting travelers. One account told of the associations of cyclists and automobilists in Germany that were requesting uniform laws for all using the roads. It was stated that there were "at least thirty different regulations in different parts of the country."

France, Germany, Italy, and Great Britain were popular destinations for American motorists. Updated information was especially important for England. Its notorious laws had been slowing down motorcar development and discouraging travel there. Not until the Automobile Association was formed there in 1905 did the situation improve much. Originally organized to patrol the roads and check for speed traps, the club grew over the years to become one of the most important in the world.

Of particular interest to all club members were the sources of reliable maps showing road conditions. Numerous maps were available but they were of little help to the motorist.

Those, like the famous Baedeker's Guide Books, mainly described shipping routes of the ocean,

lake and river steamers, along with land routes of the numerous railroads which were spreading across every industrialized nation. Often electric lines, both urban and interurban, were included. They had become an increasingly popular mode of travel, especially in the United States.

Many times there would be mention of carriage drives and cycle or walking trails, particularly in vacation areas. Livery stables with horses for hire were located in cities as well as in resorts, but it would be a number of years before car rental places became as common. For those sportsmen who were interested in fishing and hunting the use of local guides was recommended. They would have regional maps or diagrams for the wilderness areas where travel was limited to horses and small boats.

The Move to Good Roads

Although main highways were shown on the maps seldom was any mention made of their condition. And that condition was of primary interest to all motorcar organizations. Travel was difficult for their members when they ventured out on the narrow rutted roads so common in the early days. Those in the country were usually maintained by farmers of the district who felt that any surface good enough for a horse and wagon was adequate for others driving over it.

Touring in France was popular with motorists of other countries who could afford to travel there as it was the first nation since Roman times to make a serious attempt to improve its roads.² In most other places, though, the reports came in that outside the cities they were likely to be notoriously bad, especially when there was rain or snow.

Even after automobile travel became more common, the roads were of questionable quality. In the 1905 New England Automobile Guide Book, the compilers stated in their introduction: "No attempt has been made to report conditions of country roads, owing to the fact they change with the weather." In the early Eighteen Hundreds, during the greatest period of steam coach development, there began to be more interest in road development. How could a vehicle expect to win the speed trials and beat the horses without good roads to race over? Then the railways put an end to that

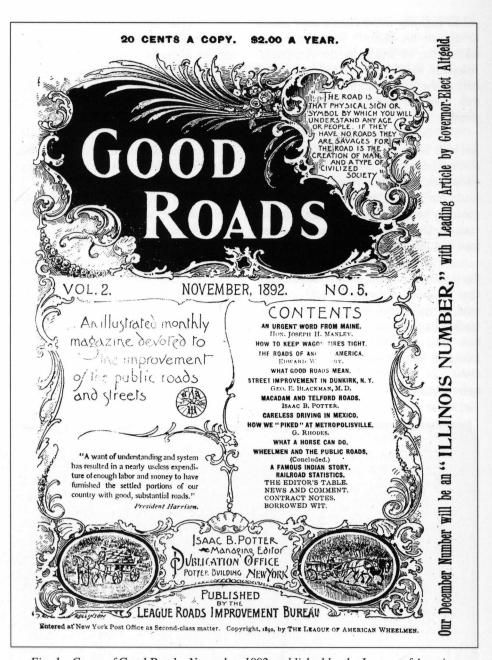


Fig. 1 - Cover of Good Roads, November 1892, published by the League of American Wheelmen, a cycle club dedicated to good roads.

question as they outpaced both horse and steamer.

There was a virtual freeze on highway construction after trains began to dominate the field of transportation. A new challenge appeared—a new set of wheels was given to the individual traveler and the roads were looked at with fresh eyes.

During the bicycle craze of the late Eighteen Hundreds the cycling clubs stated espousing the cause of good roads. One of the leaders was the League of American Wheelmen. Its publication, *Good Roads*, in 1892 and 1893 offered in some ads, "One Hundred Dollars in gold to be paid in prizes for photographs of Bad Roads."

The November 1892 issue (Fig. 1) printed various before-and-after pictures of roads and gave reports of contracts let for improvements: "San Francisco—Brick paving will be begin in San Carlos Avenue between Nineteenth and Twentieth Street"; "District of Columbia—Washington—Proposals will shortly be issued for the work of paving two or more principal streets with brick, the experiment on one street having proved successful." The page had thirty other contract items listed.

One of the pictures in the November issue showed two horses pulling a wagon through mud up to its axles and the caption read, "Over the public highway every citizen must travel to deposit his ballot." This quote was taken from an article by the Honorable Joseph H. Manley who added, "...it is the duty of the state to see to it that the roads thus used are made as near perfect as possible."

In that issue which was published just after an election, the editors of *Good Roads* commented that the "vote of the wheelmen and their co-workers for good roads has had its effect. It may not be generally known to the politicians that this vote wields the balance of power in at least five important states."

It was a slow process to fill in the potholes, smooth out the bumps and coat the basic surfaces of rock or clay, sand or muck, but progress was being made in a few years the cycling groups had some powerful allies. They were joined by the motorcar owners and their clubs in numerous Good Roads movements.

The largest national organizations could be most effective in improving the highway systems. They brought pressure on their governments to provide money for needed improvements; then they would encourage their members to see that the jobs were done right.

In the United States, representatives from some of the regional clubs which were interested in such projects met during the Chicago Auto Show in 1902 and formed the American Automobile Association. To this day, the Triple A carries on the cause of helping the motorist.

In other countries, the motor clubs were working on similar projects for improving their roads. They were especially active when a racing event was being planned. The testing of vehicles for speed, handling ability, safety and durability were important concerns to manufacturers hoping to persuade the buying public that their machine was the best.

Clubs and Racing

The first motorcar race was sponsored by the first club for these vehicles, the Automobile Club de France (Fig. 2). The French continued their interest and their leadership in the sport. Several earlier organizations combined and later formed the Federation Internationale de l'Automobile. Known as FIA, this has become the international sanctioning organization of racing.³

All the various aspects of the sport have clubs, hundreds of them. As they developed over the years, their governing bodies laid out rules concerning drivers and their cars. They are the keepers of those all-important records made in speed trials and endurance runs.

Rallies, races, hill climbs, and endurance runs often took place on the existing roads until the problem of controlling spectators became too much of a problem. The clubs were effective in



Fig. 2 - Automobile Club de France poster for the 1903 automobile and cycle exposition, Paris

getting regular race tracks laid out in those communities which had enough motorists to sponsor the events.

For some time long distance trials continued to be run on existing roads, and their wretched condition might have been part of those tests. Such runs were used by the Good Roads Movement to publicize the need to upgrade highways.

After road racing was abandoned in most places, the hundreds of primitive tracks which replaced it have also about disappeared, but not the clubs which sponsor events. In recent years, there has been an increasing interest in preserving the history of past races, the people involved and the cars which participated. Once in a while, a track is resurrected.

With some rather good roads and an unusual tolerance by authorities of the new vehicles appearing on the scene, France was a logical place for the earliest trials. In 1894, the Paris-Rouen Reliability Run was held.

As Anthony Harding stated in his book, <u>Car Facts and Feats</u>: "In the earliest days of motoring, every contest between vehicles was essentially a test of reliability." The 1894 run was well named.

It was successful enough to spark interest in another venture the following year. The Paris-Bordeaux-Paris Race of June 1895 was a genuine trial. Out of the twenty-two contenders, nine were able to complete the distance of over 732 miles. This race, considered the first for motorcars, was planned by a new organization, The Automobile Club de France.

Griffith Borgeson wrote of it in his article, "The International Historical Commission of the FIA" for *SAH Journal* No. 92: "The oldest automobile club in the world, and the model which most others tried to follow, is the Automobile Club de France, founded in 1895. As clubs came into being in other countries they looked to the ACF for leadership."

Where would racing be without the clubs? And where would the history of racing be without the records kept by the clubs?

Even in France, the bonerattling, metal-splitting road surfaces could test severely those new machines. Some had only a brief break-in period before they were rolled out onto a track. It is surprising that any survived. Fortunately, a number have and are displayed in museums or shown off by club members who own them.

Most museums have a competition car or two along with some prized sports cars but those with outstanding displays of early ones are the Daimler-Benz Museum of Germany, the National Motor Museum (Montagu) of Great Britain and the Indianapolis Motor Speedway Museum of the United States. A newer one, the National Auto Racing Hall of Fame and Museum in Flemington, New Jersey, founded in 1978 by the National Old Timers Auto Racing Club, reportedly has the oldest dirt track in America.

In addition to encouraging the preservation of those record-breaking machines various clubs have been tracing the history of the racing pioneers. The British Motor Racing Historical Society was started in Yarm, England, by Martyn Flower in 1985. As he wrote to the Society of Automotive Historians (Journal, No. 108): "Interests of members include the land speed record, prewar racing, statistics and histories of circuits, cars and championships, beach racing, cyclecars, Brooklands, hill climbs, racing personalities, Grand Prix, sportscar and endurance racing, marque histories, obscure events and the collecting of racing literature and photographs."

These are worthy goals for any historians, just as SAH demonstrated a few years earlier. In 1979, it had formed a Racing Chapter under the direction of Fred Roe.

Other clubs with similar goals have been listed in the annual directories of *Hemmings Vintage Almanac*. A few of them are:

Antique Auto Racing Association, founded 1973, for vintage race car owners and enthusiasts; dirt track exhibitions.

Atlantic Coast Old Timers Auto Racing Club, founded 1983, antique oval track racers; interested in records of racing history.

Eastern Museum of Motor Racing, founded 1975, tries to preserve motor racing history.

National Auto Racing Historical Society⁴, interested in preservation of American auto racing history.

New England Antique Racers, founded 1981, oval track racers prior to 1979.

Around the world the records were kept rather well on cars involved in racing, but most early organizations were not interested so much in the history of the automobile as they were in the survival and fair treatment of their members. They worked hard to continue the improvement of vehicles and the industry which produced them by sponsoring shows and races which demonstrated those improvements. Outstanding were their efforts to see that the cars would have safe roads on their trips and that drivers would have fair legal treatment wherever they traveled.

Old Car Clubs

Over the years, however, certain organizations have been leaders in encouraging members to find out more about the vehicles they owned, who designed them, and the awards which had been won either in the show ring or on the racing field. None of these started before the Thirties. In fact, the first was the Veteran Car Club of Great Britain⁵ founded in 1930.

The one which became the largest antique car club in the world is the Antique Automobile Club of America, founded in 1935. A few years later the Horseless Carriage Club (1937) and the Veteran Motor Car Club (1939) were organized in the United States.

Since these started, the number of clubs concerned with the preservation of all types of vehicles has grown worldwide. Some of the clubs are international in scope.

An amazing number have been formed. Their range is from multi-marque ones like the Antique Automobile Club of America and the Veteran Car Club of Great Britain (a couple of examples out of hundreds) to those which concentrate on a single marque, as the Checker Club and the Lancia Motor Club, Ltd. Single models may rate a club (Pontiac's Firebird), even a single year of a car. The '54 Ford with its innovations is considered important enough to be the focus of a group of enthusiasts.

Another type is the registry. Often it is designed primarily to locate and record the number of surviving vehicles made either many years ago (Locomobile and Scripps-Booth) or were produced in limited quantities (Dodge La Femme and Squire). For their members the registries may attempt to provide some technical assistance for the best restoration of their cars. Occasionally, they are able to share knowledge of the

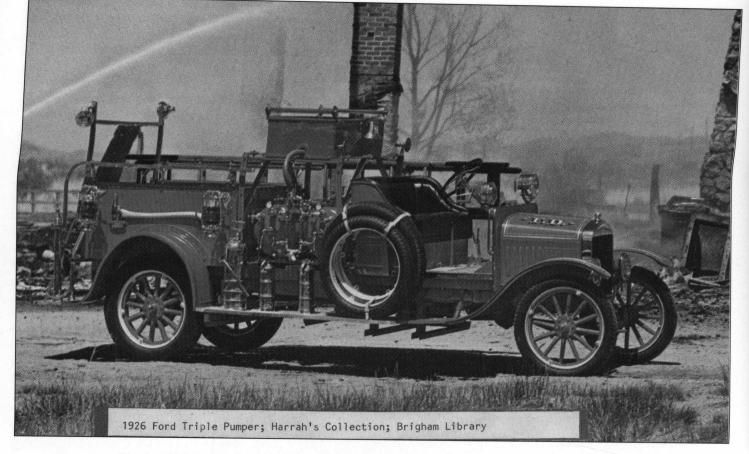


Fig. 3 - 1926 Ford Model TT Triple Combination Pumper (4 cyl., 20 h.p., price when new: \$1,000)

location of rare parts for some of these survivors.

Practically all these clubs are interested in properly identifying and dating vehicles belonging to members. To facilitate this many have libraries belonging to the club or to its official historian.

On the other hand, some become more or less social clubs. They are among the finest organizations anywhere for those people who are interested in showing off their "pride and joy" and having enjoyable get-togethers with likeminded members and their families.

When earlier clubs of this type began they were run by the men who were restoring and displaying their vehicles, and the offices were limited to them. Meanwhile, the women provided support and some delicious food for "bring-adish" dinners and meets. As the wife of one Model A Ford owner stated at an annual post-election meeting, "My husband thanks you for choosing him as your secretary and he will perform his duties to the best of my abilities."

Even if the emphasis is on car ownership and the local activities in which members are involved, a club usually will have a connection with some national organization. Its publications provide a larger market for ads of parts and manuals or that longed-for motorcar than the region's newsletter is able to do. If occasionally some one comes across a new/old item of local automobile history, the national magazine can give it the publicity it deserves.

Headquarters will provide information helpful in managing special events, and the national publications spread the word on regional activities. Certain of those specials become the highlights of any club year. The calendar may read: Planned Tour; Swap Meet; Antique Vehicle Museum Visit; Races or Runs; Annual Inter-Club Car Show with exhibits, flea markets, judging and awards; and, most unforgettable of all, Holiday Parades.

What would a civic parade be without the antique and classic cars lent by the clubs? A local politician will be pleased by all the acclaim he gets as he and his family ride down Main Street in a burnished maroon limousine. He is well aware that his rivals in their borrowed vehicles will also be cheered by the crowds. Or is it the silver and chrome

convertible, the navy blue roadster with its open rumble seat or the rare forest green tourer of the Twenties complete with running boards and wire wheels which rate the cheers? As the cars, the bands, the balloons and the floats pass by, the greatest crowd pleaser of them all approaches. It is a gleaming red and brass antique fire engine being driven by a proud member of the local club, the organization which helped the fire department in its restoration with paint and polish, with parts and know-how. (Fig. 3)

All these special events have a long history. Before there were "old cars" the new ones were being introduced at races, hill climbs and shows. They were tested on tours of the countryside on roads not yet prepared for the arrival of the horseless carriage.

In addition to races, hill climbs and rallies — all the sporting events they attended — an increasing number of owners had been finding more ways and places for showing off their new wheels. Every year after 1900 the cars became more numerous, somewhat more reliable, and the drivers definitely were more skillful in handling emergencies. A

pleasure trip out of town might be planned, with their local club making some necessary arrangements for fuel and tire supplies for the cars and hotels for the travelers. These pleasure tours would be neither races nor runs, although any trip in those days could be an endurance test for both driver and machine.

The other type of "tour" was the reliability run, popular in many countries, particularly when combined with hill and mountain climbing as additional tests of the cars. The speed and distance would be carefully recorded.

In the United States, Charles J. Glidden and the American Automobile Association sponsored their first in 1905 to demonstrate the reliability of the early autos. As the companies realized the value of the publicity engendered, they began to dominate the Glidden Tours with their numerous entries and the amateurs lost out. The last one of that period took place in 1913. However, they were revived in 1946 with Glidden Tours sponsored by the Antique Automobile Club and the Veteran Motor Car Club.

From the very beginning, there were also many organizations catering to the industry. They have been all business, or almost always strictly business. Lists of them include both national and international organizations, many of which have an important effect on the development, the production and the use of vehicles all over the world. One is the International Organization for Standardization which is based in Geneva, Switzerland. A few others are the International Office of Motor Vehicle Manufacturers (Bureau Permanent International des Constructeurs d'Automobiles) of Paris, France, and the International Road Federation and the Society of Automotive Engineers, the latter two based in the United States.

There are dealer associations, parts suppliers, service industries, safety overseers, travel advisers and road information specialists plus racing event managers. These and many others are included in listings in the <u>Directory of Motor Vehicle Related Associations</u> published by the American Automobile Manufacturers Association. This book is regularly updated by the organization.

Automotive History Organizations

Entirely different is the type of organization which delves into the history

of the vehicles as well as the history of the industry. The outstanding one with this purpose is the Society of Automotive Historians. In 1969, SAH was established by G. Marshall Naul and Richard B. Brigham and thirty-seven charter members. Fourteen of them were present at the first meeting held on October 11, 1969, at Hershey, Pennsylvania.

The primary purpose of SAH has been to exchange information, to publish as much as possible of the material which comes in from members and others interested historians, and to honor with awards those who have contributed the most to research on automotive history.

Almost from the beginning, the organization became an international clearing house. Its correspondents have supplied authors and other researchers with some answers to their pleas for help. Besides the "Information Requested" columns for them which appeared in the SAH Journals, there were often articles with suggestions on methods and places of research. Also, numerous informative reports on books of special importance to historians have been printed in most issues.

Many of the early members, as well as other who joined them later, had for years been trying to "set the record straight." They had discovered numerous errors while studying various facets of automotive history. The date a vehicle was made could be recorded differently in five separate publications. On the other hand, a misspelling of its name might be repeated endlessly when one after another lister copied the original error.

Other clubs have also been trying to "set the record straight" in the fields of their greatest concern. The American Truck Historical Society was started in 1971 with the purpose of discovering more about the neglected commercial side of the story. Its founders also wanted to see that some of the trend-setting vehicles were properly preserved.

Some other rather neglected aspects of the automotive field have aroused the interest of historians. There are clubs which concentrate on fire fighting apparatus, other on military vehicles, or on motor buses, or antique cycles, or on professional vehicles (funeral cars, etc.). Mentioned in *SAH Journal* No. 129 was the Society of Freight Car Historians. This was described as a club for "covering

transport of autos by rail and ship."

Surprisingly, the rarest type of club is that devoted to the people who founded the industry and pushed along its fantastic, its world-changing development.

There was an exception, though: one club was devoted to the pioneers. That was the Automotive Old Timers, established in 1939. As stated in the frontispiece of their publication, Old Timers News, this was "a national organization of America's motor car pioneers, dedicated to those whose vision, courage and industry created motor transport."Formerly headquartered in New York City at the Hotel Roosevelt, the club was relocated to Midland, Michigan, and then to Dearborn where it operates the Automotive Hall of Fame. This place contains a library which "covers the history of people in the motor vehicle industry."7

The single-marque clubs are most likely to be the ones to honor people who invented and developed their favorite vehicles. The H. H. Franklin Club often had items about the history of its company and Franklin, the founder, in its magazine *Air Cooled News*. A few others which are named for the developers of their cars are the Bentley Drivers Club, the Ferrari, Porsche, Rolls-Royce, Studebaker, Tucker, and Willys clubs and, of course, the numerous ones carrying the Ford name.

In most every nation where selfpropelled vehicles were manufactured some organization is recording the history of its industry, the names of pioneers as well as those of people and companies that are continuing the development. The Automovil Club Argentino honored the maker of Argentina's first car, named Anasagasti,8 with a plaque depicting the tourer. Two clubs, the Royal Automobile Association and the Sporting Car Club of South Australia, helped authors George Brooks and Ivan Hoffman report on the story of auto makers in their country when they were assembling material for their book, South Australia Motor Cars.

On through each of the nations the lists have become longer, but they are never complete. The clubs have found verification of their finds in museums, in libraries and in many a publication.

When a club is formed that is news. When that club sponsors a car show, a racing event or a record-breaking

tour, it becomes important news. Automotive publications increased by the hundreds, the thousands, like the vehicles they covered. As they did, so did reporting of all types of club activities from the legal matters brought before the courts by some eagle-eyed overseeing groups to the frivolous "tire-kicking" and enjoyable get-togethers of a caradmiration society.

And there are those other organizations which regard as most important the news of the discovery of some historical facts hidden in old records, in unknown publications or in the hitherto unpublished stories by people who have worked on the vehicles. The Society of Automotive Historians often publicizes information on other clubs doing the same work it does—researching history. In SAH Journal No. 108, Griffith Borgeson reported: The Italian Association for the History of the Automobile was organized in 1987 with these purposes, "the Association's objective is to encourage and stimulate research and publication dealing with the history of motorisation in Italy. It is intended to serve as a practical instrument of improved utilisation of existing resources and improved communication between all sectors of this discipline."

In SAH Journal No. 118 Norm Buckart wrote: "the Locomobile Society of America was formed to preserve the cars and their memory...there is, however, no book published, no roster of surviving motor cars and no compilation of the existing technical facts, data or even history of the car, other than a few scattered magazine articles. The Locomobile Society has been formed to correct all that before it becomes irretrievably too late to do so."

Mr. Buckart was probably pleased to read in *SAH Journal* No. 126, a little over a year later, the item that told of the Sprague "Stanley Register" which would include Locomobile steamers along with the Stanley and Mobile listings.

In that same issue, No. 126, Bob Youngberg, another seeker of facts, wrote of the efforts to find information, documents and Nyberg automobiles for the founder's family in Sweden. As a result of Mr. Youngberg's efforts, this rather new club already has been able to locate a variety of material, enough so

that the Henry Nyberg Society was able to put on an impressive exhibit in Chicago.

Another new club and its aims were announced in *SAH Journal* No. 147: "the Velie Register, dedicated to finding and tracking Velie vehicles, recording the history, events, and owners of Velies, and acting as a source of information, company history, and news has been formed."

Each of these clubs might have a different purpose at the time of its founding, but all would probably agree with the Antique Automobile Club of America which states in the frontispiece of its magazine: "dedicated to the history of the automobile."

Some of the earlier organizations reported on their aims in the Brigham's small magazine *The Road to Yesterday* when it was published years ago:

The H.H. Franklin Club, formed in 1951, stated that "the original purpose was to establish a medium through which Franklin history could be recorded."

The Mercer Associates reported: "this group has already accomplished what many similar ones are starting to do. It has compiled a list of all known Mercer cars still in existence." 10

The Small Car Owners' Club wrote about this one: "a club with a well-defined purpose—to keep the Crosleys on the road, not as pampered pets but as workaday vehicles."

The Steam Automobile Club of America started in 1958 with a speculative look to the future and a cherishing glance towards the past: "tomorrow's steamers are being developed. today's experimentals improved, and yesterday's oldtimers preserved with the encouragement of the Steam Automobile Club. Believing that a steamer can provide features no gas car can match, members all over the country are working on both the new and the old."12

In *The Road to Yesterday*, Issue No. 13, 1961, the Horseless Carriage Club of America stated: "any one who is interested in the preservation of motor vehicles of ancient age and historical value, their accessories, archives and romantic lore will find a welcome in this club with its record of twenty-five years of encouraging such preservation."

Those years have more than doubled. Some of the early clubs may have changed names and addresses or

enlarged their scope, but their reasons for being have not been changed.

One of those clubs was noted for its many years of delving into automotive history. It had aims similar to those of SAH. Keith Marvin once wrote about this club: "the Automobilists of the Upper Hudson Valley feel that one of the greatest necessities in the field of automobilia is historical research and the publication of historical matter dealing with out-of-the-way makes of cars, built both here and abroad. The club attempts to publish as much complete material on this subject as possible in *The Upper Hudson Valley Automobilist*."

There may be a variety of aims in these many organization, but all of them have been helping to run down the story on those elusive vehicles.

REFERENCES—CHAPTER IV

- 1. Background notes on National Automobile Shows 1900 to 1940, Automobile Manufacturers Association (Detroit, Michigan, 1956), p. 3
- 2. <u>Encyclopedia Britannica</u>, "Roads and Highways" (1969), p. 368.
- 3. Newsletter No. 63, The Society of Automotive Historians
- 4. <u>Chilton's Complete Book of Automotive Facts</u> (1981)
- 5. <u>Car Facts and Feats</u>, Anthony Harding (Doubleday & Co., Garden City, New York, 1971).
- 6. "Pride and Joy" feature, *Horseless Carriage Club Gazette*, numerous issues during the 1960s and 1970s.
- 7. <u>Directory of Motor Vehicle</u>
 Related Associations, (1986 ed.), Motor
 Vehicle Manufacturers Association (now
 American Automobile Manufacturers
 Association)
- 8. <u>Automobiles of the World,</u> Joseph H. Wherry (Chilton Book Company, Philadelphia, Pa., 1968).
- 9. The Road to Yesterday, November 1960, No. 7
- 10. The Road to Yesterdayy, March 1961, No. 10
- 11. The Road to Yesterday, January 1961, No. 9
- 12. The Road to Yesterday, August 1960, No. 4

CARS MADE IN URUGUAY (1955-1977)

by Alvaro Casal Tatlock

By the 1920s, Uruguay stood third in the world in the ratio of cars to population. Until then, the market had been entirely supplied by vehicles made in other countries. However, in 1926, General Motors inaugurated an assembly plant in Uruguay, and by 1928, General Motors Uruguay S.A. had sold 5,540 Chevrolet cars and trucks.

But it was not until the 1950s that Uruguay began to produce vehicles of local design. The impetus for this was the raising of import duties on automobiles in the early 1950s. In 1955, the first plans to produce cars in Uruguay were laid out. Danrée & Company started to offer the R-Sport. This was a fiberglass-bodied rear-engined sports car built in a rather small garage in Montevideo by Danrée and Silveira, with Renault 4CV mechanical components. A number of these cars were sold and some can still be seen occasionally on the streets of Montevideo (Fig. 1).

In 1960, import duties for vehicle components were lowered, so some foreign cars and utility vehicles started to be assembled locally. A case in point was the Tempo pickup sold by Germania Motors, S.A. The Tempo works were inaugurated with pomp and all authorities present, including the German Ambassador and the President of Uruguay.

Others insisted on producing locally-designed vehicles. An interesting example was the ugly MP, made by Mutio, Passadore & Co. in association with Carmeta. This angular two-door



Fig. 1 A sports car from Uruguay, the 1955 R-Sport, with Renault 4CV components and a fiberglass body.

station wagon with Panhard mechanical components was introduced in 1962 and dropped in 1964 (Fig. 2).

In 1965, Carlos Ott designed the Charrua. This was a boxy pickup truck with Chevrolet mechanical components, and was made for a time under the auspices of GM.

Perhaps the most intriguing car of the decade was the Concorde 700 of which no examples survive and of which there are no photographs except a newspaper clipping with a blurred photograph of what in 1966 was proudly presented as the production line for this vehicle. At the time, it was stated that the car was made entirely in Uruguay, except for the carburetor, spark plugs, and bearings, and that there were two prototypes ready, with 700cc two-cylinder engines and weighing 800 kilos.



Fig. 2
The 1962-64 MP, with Panhard mechanical components. Ugly but practical.

Then nothing else was heard of it or the men who intended to produce it: Srs. Pedro Walter Garrido Breno, Walter César Cuadra Badano and Fernando Perdomo Avallaneda. Twenty years later, I contacted one of them and the entrepreneur of yore was laconic; he said he didn't know where his former associates were and nor did he have anything on the Concorde which could be of interest to motoring historians.

Almost simultaneously with the Concorde adventure, in the provincial city of San José, the FT-1500 was born, being just a Ford Taunus-based two door sedan (Fig. 3). In 1967, another angular station wagon-like vehicle came along. This was



Fig. 3
The 1965 FT 1500, Uruguay's version of the German Ford Taunus.

the NSU P6, approved by the German Lindau Technical Institute and obviously with NSU mechanical components. This vehicle in a later version was called P10, and there was talk of making it in other countries, too, but the purchase of NSU by Volkswagen in 1970 put an end to this Uruguayan dream.

In 1968, Esposito S.A. of Montevideo and Las Piedras announced that it would manufacture vehicles with Vauxhall Viva components. Its product, the Grumett 1825, appeared in May 1970. This was a "coupe-utility" in the Australian style (Fig. 4), and was produced until 1976. Today, Esposito sells used cars and new GM vehicles.

In 1969, designer and empresario Horacio Torrendell announced what would eventually become the best-selling locally designed motor vehicle, the Indio utility vehicle with small gasoline and diesel Bedford engines. Produced until 1977, total production of the Indio reached 2,200 units (Fig. 5).



Fig. 4
The Grumett (1968-76) used a locally-built tubular chassis, fiberglass body, and Vauxhall HA Viva mechanical components.



Fig. 5
The Indio was a two-wheel drive utility
vehicle, powered by Bedford's small diesel
and gasoline engines.

My own favorite, however, was the ambitious product of the brothers Waldemar and Carlos Rago, who in a garage in Montevideo's quiet residential district of Pocitos, in 1967, started to make a small coupé, designed by a local artist named De la Maria (Fig. 6). This was a fiberglass-bodied car, with Hispano-Villiers 325cc two-cylinder twostroke engine. This was a troublesome engine and some owners replaced them with BMW 700cc and NSU power plants. No more than 12 cars were made (and I have rescued one). Afterwards the Ragos produced only fiberglass components for other vehicles.

Thirty years later, in 1997, thanks to the Uruguyan Consul in New York, I found Waldermar Rago in Linden, New Jersey, where, at 67, with the help of his son and daughter, he was running W.R. Auto Repair Inc. at 820 E. Elizabeth Avenue (Fig. 7). When Le Patron learned that I owned a Rago and had included it in a book on motoring in South America, he was more than willing to tell me his story, which is now told for the first time.

"I used to own a 1962 Rabbit scooter and one day, while I was on holiday, I thought: this bike would be really nice if it had a roof on it. When I returned to Montevideo, I started to work around that idea: a microcar based upon a



Fig. 6
The 1967 Rago coupe, one of 12 made.

scooter. That was in 1965. One day, Eduardo De la Maria, who owned a vast Talbot Lago Record convertible came and asked if I could adjust its electric gearchange. I told him I couldn't, because I was too busy. He insisted in knowing what it was that kept me so busy. I showed him the boxy vehicle I was working on and I asked what he thought about it."

"He just said: 'It's no good. It's disgusting." (Fig. 8)

"I got angry and replied: 'Can you build something better?'"

"He said: 'Yes, in plastic.""

"Eduardo De la Maria was a gifted designer but I just didn't believe plastic or, in fact, fiberglass, would be strong enough. So he came back with a fiberglass box and told me to try to break it. I kicked it, hammered it, everything. I just couldn't break it. That convinced me and we started work on the car for which De la Maria had already produced a design." (Fig. 9)

"While De la Maria worked on the body, my brother Carlos and I worked on the mechanicals. We found the Villiers engines locally, but I mistakenly thought they were the respected British engines. When they were deliverd, I realized that they were in fact Hispano-Villers 325cc twin-cylinder two-stroke engines made in Spain. We pressed on regardless but later on my suspicions were confirmed; these engines weren't the real McCoy. They weren't very good. We invented the transmission, the front and suspension, the chassis . . . everything. We even had to make the windowwinding mechanism. The only purchased things were those Villiers engines, and the first wheels. We had bought four wheels for the prototype and when we went to buy some more in order to build a batch of cars, the man who had sold the first four wheels said he hadn't any more. So we had to make the wheels in our workshop, too. As you can see, there were all sorts of problems. For example, when we finally completed a prototype, we noted that it was too narrow for two people. We couldn't sit side by side inside the body. This didn't worry De la Maria too much. He just cut the car in half, front to rear, and he widened it. Then we had the car running and it reached almost 50 mph."

"After this, we worked very very

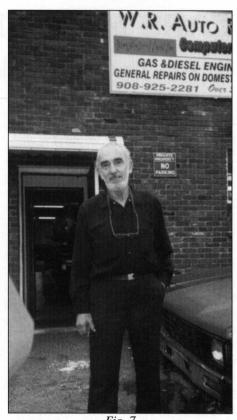


Fig. 7
Thirty years later: Waldemar Rago, in front of his shop, Linden, New Jersey, 1997.

hard and concentrated on building three cars for a start. There were buyers for these and for many more. We were enthusiastic. We started to sell cars. Cars we hadn't yet built. But we didn't take into account that there was a tremendous inflation at the time, and when we delivered the cars, we were in fact losing money. We asked for a loan and we couldn't pay it back. By 1972, I was bankrupt. I lost six cars and my home."



Fig. 8
The Rago that wasn't. This initial design was superseded by that of De la Maria.

Waldemar Rago came to the United States as a poor man speaking no English, worked for others, and eventually started his own business. He has not had an easy life. But when he saw the picture of the Rago in my book, he looked me in the eye and said "I was ruined by those cars. But, you know something? If you asked me to build them again, I'd build them!"

But ventures like the Rago were doomed in any event. A government decree of 1970 radically changed the rules of the car manufacturing game, opening real possibilities for large assembly plants. Obviously the handwriting was on the wall for small entrepreneurs.





Fig. 9
The first production Rago under construction, 1967.

1967 RAGO SPECIFICATIONS

Engine

Make Hispano-Villiers

Type two-stroke parallel twin cylinders

Bore x stroke 57mm x 63.5mm

Displacement 325cc.
Horsepower/rpm 16.5/6000
Electrical system 12V battery/coil

Transmission (integral with engine)

Clutch multiple disc in oil bath Gearbox type three-speed manual

Suspension

Four-wheel independent, transverse leaf springs, hydraulic shock absorbers

Brakes

Type drum, hydraulic on four wheels

Diameter 90mm, front and rear

Chassis and body

Chassis tubular steel

Body reinforced fiberglass

Body style 2 + 2 coupe

Dimensions and weight

Wheelbase 2020mm Front track 1220mm Overall length 3550mm Rear track 1180mm Overall width 1450mm Curb weight 395 kgs Overall height 1300mm Tire size 480 x 12

Fall 1998 39



AUTOMOTIVE HISTORY REVIEW

FALL 1998



ISSUE NUMBER 33

Non-Profit U.S. Postage PAID Alexandria, VA Permit No. 5610

The Society of Automotive Historians, Inc. 1314 Trinity Drive Alexandria, VA 22314-4276 U.S.A.



AACA LIBRARY & RESEARCH CENTER 501 WEST GOVERNOR ROAD P.O. BOX 417 HERSHEY, PA 17033

Kim M. Miller #0883 [1998]
102 Birch Avenue
P.O. Box 431
Mt. Gretna, PA 17064-0431