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# AUTOMOTIVE HISTORY *Review*

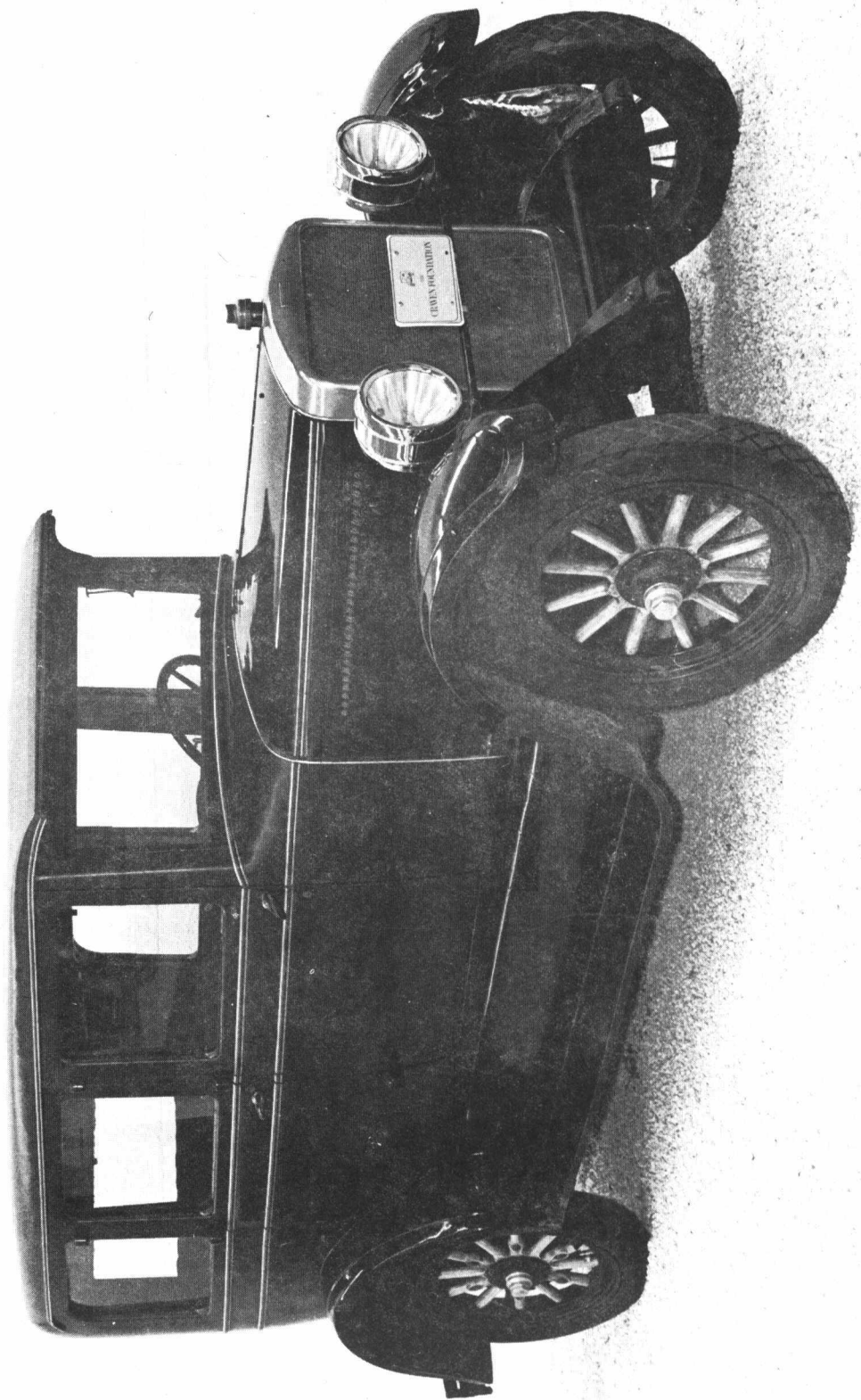
WINTER, 1977-1978

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ROBERT SAMUEL McLAUGHLIN, 1871-1972

*The Society of Automotive Historians*





# AUTOMOTIVE HISTORY *Review*

A PUBLICATION OF THE SOCIETY OF AUTOMOTIVE HISTORIANS  
RICHARD B. BRIGHAM, EDITOR

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The Society of Automotive Historians

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## THE COVERS —

FRONT - Robert S. (Col. Sam) McLaughlin. Picture loaned by the Craven Foundation Museum.

BACK - Gray-Dort advertisement, from MACLEAN'S MAGAZINE, January 24, 1918.

INSIDE FRONT - 1925 Brooks Steamer, owned by the Craven Museum, Toronto.

INSIDE BACK - 1909 Tudhope. This was the first gasoline driven vehicle purchased by the Bell Telephone Company of Canada. Picture is from "Vintage Canada" magazine, September, 1975.

## EDITORIAL COMMENT

### *THE NEED FOR REGIONAL CHAPTERS*

The Society of Automotive Historians had its beginnings in the summer of 1969, and was formally organized on October 11th of that year at the headquarters of the Antique Automobile Club of America in Hershey, Pennsylvania. At the conclusion of that meeting our membership consisted of just 37 people, thinly spread over the United States and Canada from New York to California, Quebec to Georgia. Now, with a world-wide membership approaching 400, our one regularly scheduled meeting is still held at Hershey on a date coinciding with the Eastern Meet of the A.A.C.A. - an event attended by a great many of our members.

In 1975 and 1976 mid-summer meetings were held in Detroit, and more such meetings are planned, at least some of which may be held in other cities. However, because our members live in widely scattered areas, it is likely that many of us will never get to a Hershey or a Detroit meeting at all. This circumstance prompts the suggestion that establishment of local or regional chapters of the Society would give all of our members a better chance to participate in the affairs of our organization.

To this end, a Canadian Chapter was formed in the spring of 1977, and is now a functioning unit. Further, it is our understanding that a British Chapter is being organized to include our many English members. It is not difficult to envision the spread of this plan. Chapters could (and should) be organized wherever there is a handful of members who can get together occasionally to discuss and investigate automotive history in their particular areas. Meetings could be held at locations reasonably convenient to those concerned. In most cases a representative from each chapter could attend the larger meetings at Hershey and Detroit, for in fact these affairs attract members from every part of the United States and Canada, and usually include overseas members, too.

Regional chapters would also attract members who otherwise might never know of the existence of the S.A.H., and local newspapers, libraries and historical societies, which might ignore the "main office" would, in all probability, give valuable publicity to local groups.

The founding of a new chapter requires, first of all, the efforts of one person who will write letters to members in his area, or - in the absence of an up-to-date membership directory - send a letter to the Newsletter asking persons in a designated area to get in touch with him. Then, set up a preliminary meeting to elect temporary officers who will apply to the club secretary for authorization to set up a chapter.

This magazine, and the S.A.H. Newsletter, will both give plenty of publicity to the doings of each chapter, if someone in each group will supply the necessary information.

# VIEWPOINT

## COMMENTS OF OUR READERS

### SOURCES OF PRODUCTION FIGURES

HARLAN E. APPELQUIST, EDINA, MINNESOTA

This letter is in reply to Mr. Roe's question about these early production figures. First I will give the sources of the figures I used in the Spring, 1977, issue of *Automotive History Review*.

- 1 - Buick, production figure from Buick factory records.
- 2 - Ford, figure from Model T Sales & Service Manual published in 1926.
- 3 - Maxwell, figure from record of factory deliveries, (MoToR, 1910).
- 4 - Cadillac, figure from factory records..
- 5 - Reo, from figures on Reo's early years, MoToR, 1912.
- 6 - Oldsmobile, from factory records of Olds Division, General Motors Corporation.
- 7 - E.M.F., from The Studebaker Story, Automotive News, April, 1941.
- 8 - Overland, from Willys-Overland story, Automotive News Annual, April, 1941.
- 9 - Chalmers-Detroit, from Chalmers ad, MoToR, 1911.
- 10 - Packard, from Packard History, Automotive News Annual, April, 1941.
- 11 - I.H.C., from story on International Harvester Company published in Automotive News, 1968.
- 12 - Franklin, figure published in Air Cooled News, the magazine of the H. H. Franklin Club.
- 13 - Rambler, figure from American Motors factory records.
- 14 - The figures I used about steam, gasoline and electric cars and body types were from a story published in 1912 by the Literary Digest about the growth of the auto industry up to that time.

Now I will take up the question about early Ford production figures. You may have noticed that in *The American Car Since 1775*, and also in *The Production Figure Book for U.S. Cars*, no mention is made of yearly industry totals; also no mention is made of production by price field. The reason that these figures could not be given is that there is no way in the world that one can give the Ford Motor Company credit for these figures and still come up with an overall picture of the auto industry, one year at a time.

Even Ford historians do not agree on early Ford production figures. A small booklet published by the Ford Motor Company for Ford salesmen in 1924 listed production figures by fiscal years, not calendar years. Then, in 1926, Ford issued an Improved Model T Sales and Service Manual which listed production by calendar years for the period of 1903 to 1925.

Up to that time Ford had built some 13½ million Model T's plus just under 20,000 cars before the Model T. For years I have used the early Ford figures from the 1926 booklet because they fit in very well with all other published material.

The figures used in *American Car Since 1775* first appeared in 1971, and when I first saw this list I asked where the information had come from. I was told "From some wheel at the Ford Motor Company". This 1971 list, covering the years 1903 to 1970, fits nothing, so I do not use its early Ford figures.

In October, 1908, the month the Model T was announced, the Ford Motor Company ran an ad in the Saturday Evening Post stating the average price of a Ford car up to that time, and the total amount of business the company had done in that period. The figure is within less than 1% of that stated in the Ford booklet of 1926. The 1971 list is off by more than 26%.

In the spring of 1911, Ford advertised in the Saturday Evening Post the scheduling of 30,000 cars for 1911. Ford's 1926 list says that 1911 production was 34,979 cars. The 1971 list claims 69,762 cars for that year. Need I say more?

During 1911 there were some 265 automobile makers, large and small, in the United States. If I give Ford credit for 69,762 cars, by the time I get to manufacturer number 25 I will have more cars listed than were produced by the entire industry, leaving 240 smaller companies with no production at all.

The silliest figure in the 1971 list is the Ford production figure of 419,517 cars for 1920. 1920 was the industry's best year up to that time, and Ford was the giant, netting over \$40 million. There is no possible way that one can credit Ford with only 419,517 cars and still come up with an industry total of 1,905,000 units. According to the Automobile Manufacturers Association, Ford, during 1920, produced 870,020 cars plus 153,532 trucks - well over twice the number stated in the 1971 tabulation. Whose list would you use?

### AN OMISSION

MAC HUNTER, STREETSVILLE, ONTARIO, CANADA

I read with interest "The Rise and Fall of New York's Automobile Industry". Surely it was a serious omission to disregard all of those excellent Brockway trucks built at Cortland in New York State over a period of 65 years, and whose "Fall" occurred as recently as April, 1977.

*Editor's note: Although Dr. Levine's article was principally about the passenger car industry, and trucks were scarcely mentioned until the last paragraph, we agree that the name of Brockway should have been included in that paragraph.*

## MORE ON AUTOCAR

MAJOR F. W. CRISMON, APO NEW YORK, N.Y.

Reference Mr. Sagall's postcards shown on page 43 of the Spring, 1977, *Automotive History Review*: the white ambulance (#3) is a 2 ton Autocar, of c. 1908 vintage. The photo was probably taken at the Army Maneuvers in Massachusetts in the summer of 1909, when 11 Autocars, including one ambulance, participated. (Source: MoToR, October, 1909).

## THE 1901 OLDS FIRE

D. J. KAVA, BEAUMONT, TEXAS

I would like to take exception to your comments about the 1901 Olds fire in AHR No. 7. The long accepted version that new blueprints were made from the surviving car rescued by James J. Brady has been debunked by history professor George S. May in his 1975 book entitled *A Most Unique Machine*. Dr. May spends some time on the fire and quotes R. E. Olds as saying that all the blueprints survived in a vault. He also notes that some 334 curved dash models were on order at the time of the fire, and this fact, rather than a surviving example, was the reason that this model was produced.

The book is sub-titled *The Michigan Origins of the American Automobile Industry*. The professor has done considerable research into the work of many of the obscure Michigan auto builders, as well as contributing a few interesting tidbits about the men who formed the well known companies. The work is well indexed and footnoted. The 5½ page bibliographical essay will probably enlighten all of the membership in one way or another. I don't recall seeing a review of this book in the Newsletter, but the AACA reviewer wanted more photos. Still, it was an excellent addition to my meager library. Priced at \$10.00, it is available from William B. Erdmans Publishing Co., Grand Rapids, Michigan 49502.

## THE NEW YORK TO PARIS THOMAS FLYER

RALPH DUNWOODIE, SUN VALLEY, ..EVADA

With reference to Dr. Levine's article on New York's Automobile Industry - the Thomas Flyer that won the New York to Paris race in 1908 was a 1907 4 cylinder car, and not a 6 cylinder model as stated. The actual car survives and is on display at Harrah's Automobile Collection in Reno, Nevada.

I enjoyed the article very much. Obviously Dr. Levine put a lot of time and research into it. I especially appreciate such an article where the back-up references are shown - as did Charles Bishop in his *Automobiles of New York*.

Regarding Mr. Brigham's reference in AHR No. 4 to the U.S. Long Distance, and John Peckham's reply in No. 5 - the U.S. Long Distance Company made the *Long Distance* car, NOT the *U.S. Long Distance* car. This statement is supported by many references. Also, I feel confident that this company never made an electric.

Referring to the pictures submitted by Mr. R.A. Wawrzyniak in AHR No. 5, pages 30-31 - the odd teardrop headlights are E & J Model 20 headlamps (Edmunds & Jones). They were available as accessory or replacement lamps in the mid to late 1920's. They had magnifying lenses and put out a powerful beam.

## THE ARGONNE

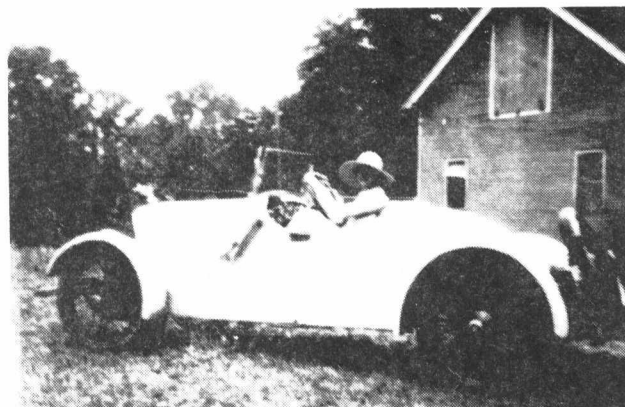
KEITH MARVIN, POMFRET CENTER, CONNECTICUT

Congratulations on the Fall, 1977, *Automotive History Review* -- a fine issue in every respect. Keep up the good work!

And special congratulations to Fred Roe for his scholarly and absolutely fascinating *The After Life of the Argonne*, one of the most intriguing bits of writing in the automotive field I've read in many a moon. This represents some real theorizing, subsequent digging by a real historian. And I, for one, agree with his theory. I have been puzzled by the spate of hybrids which seem to have been around in the late 1920's and early 1930's, and it would appear that Fred has hit the nail on the head.

At the risk of carrying coals to Newcastle, I am enclosing a snapshot of an Argonne which I can remember as a very small boy. This car was owned by the late Edward A. Wachter of Troy, New York. Ed and one of his brothers have been immortalized in the National Basketball Hall of Fame, and were among the most famous players who ever graced that sport. He was also a golfer, and when the Troy Country Club was opened in 1927 he was quite active there. He had just bought this canary yellow Argonne second hand in Boston, and it was as sporty a car as I ever saw. I was only five or so when he sold it, but I remember riding in it on one or two occasions. This picture was made from a negative he had in a scrapbook and shows some gal sitting in it. He thinks it was around 1928 or so. Ed, a lifelong bachelor, was something of a ladies man in those days, but he couldn't remember the girl.

You will notice that this car, despite its wire wheels, is basically the same car as the production Argonne shown on page 28. Note the unorthodox radiator ornament. The car was outstanding in any parking lot and Ed cut quite a figure in it. As he explained



Ed Wachter's Argonne, with unknown young lady at wheel.

to me, when he sold it -- about 1929 or 1930 -- it still wasn't considered out of date in any way by the rank and file, although, as he admitted, four-wheel brakes would have been advisable.

There was another Argonne in the Troy area around this time and I have been trying to get a bead on it but without success to date. Possibly it will turn out to be the same car. With only 24 original examples of the make, it would seem likely, in any case.

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### **SOME NOTES ON REO**

*HARRY PULFER, LA CRESCENTA, CALIFORNIA*

The last AHR was very fine, and I am glad that we can get all that information on long gone makes. I find that much of the so-called history written today is just a repeat of the wrong data. On the R. E. Olds story may I add a bit?

To start with, when Olds left Oldsmobile in 1904 the company he founded was called the Reo Car Company, a name which was later changed to Reo Motor Car Company. In my collection of Reo emblems is the early type script, which you seldom see, used on the early cars. When they started using enameled badges there was a short time when the mark of the Reo was R-O, when sold by R. M. Owen & Co., which was the sole sales agency.

On exports to Spanish-speaking countries we see the name spelled RIO. The Spanish pronouce "E" as "A", but if you use an "I" you get REO in sound! I have both of these varieties in enamel.

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### **THE EARLY ENGLISH STEAM COACHES**

*FREDERICK D. ROE, HOLLISTON, MASSACHUSETTS*

Mr. Hayward's letter in Issue No. 7 touches on a point which I have also wondered about - the fact that none of the quite numerous steam vehicles which ran on the roads of Great Britain in the first half of the nineteenth century seem to exist. Mr. Matthews' suggestion that earlier examples were cannibalized for parts for later ones seems logical. In addition, I would suggest the possibility that some of them just plain wore out and were junked. Accounts of the time are full of references to mishaps, breakdowns, and road hazards, all of which could have contributed to the eventual decay of the vehicle. The poor metals used in their construction, the inadequate design of their components, and the use of stage-coach principles in body design were all factors which may have contributed to their self destruction.

Regarding the remains which Mr. Hayward saw in Glasgow, the following notes appeared in a compilation of vehicles existing in museums in Great Britain, which was published by the Veteran Car Club of Great Britain in 1955 as explanation for portions of a vehicle which at that time was listed as in the care of the Art Gallery and Museums, Kelvingrove Park, Glasgow:

*Steam Coach or Carriage; Engine and part of frame and steering gear, two cylinder, approx. 18" stroke, claimed date 1820-40.*

*"The identity of the vehicle from which these portions came has not yet been definitely established, but a distinct possibility is that it was a Gurney-designed tractor, one of which is known to have been shipped to Leith in 1831 and to have made several trips in the Glasgow-Paisley neighborhood in that year. (vide Young "Steam on Common Roads", 1860, p. 198). The stroke of the pistons, the crossheads and guides and the front springs and steering gear appear to conform with the Dance-Gurney drags as used on the Cheltenham Service, February-June 1831".*

According to "The First Hundred Road Motors", R. W. Kidner, 1950, the drags used in the Cheltenham Service in 1831 ran a total of 4,000 miles. Kidner's book devotes pages 10-14 to the work of Goldsworthy Gurney.

Perhaps more information on this interesting remnant has come to light in more recent times and one of our friends in Great Britain can further enlighten us.

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### **THE CARS OF MINNESOTA**

*ELLIOTT KAHN, CLEARWATER BEACH, FLORIDA*

In Issue No. 6 I note an article on vehicles made in Minnesota, by Stanley Liszka, who in part is quoting from another article. Partly because that article was written a few years ago, the makes on the list are by no means a complete list of brands produced or assembled within the boundaries of Minnesota. I also doubt the names given were all correct, too. For example we know that Ford Motor Co. has long assembled cars and trucks in the St. Paul area and still do, but Overland and International Harvester? I can find no indication that either of the latter firms ever built a truck, bus or car in the state of Minnesota. Maybe someone will inform me when this event happened if it did. IHC does have a Minnesota assembly plant to be sure but they don't make trucks or any type of vehicle that might be deemed similar, but they do make farm machinery, and possibly farm tractors.

*Editor's note: Mr. Liszka's contribution to Issue No. 6 was based upon an article written in 1972 by Mr. Alan Ominsky and published in the Fall, 1972, issue of MINNESOTA HISTORY. Concerning the Overland car, Ominsky writes "The well-known Willys-Overland firm, based in Toledo, Ohio, built an imposing facility at 2572 University Avenue (now occupied by International Harvester) in 1915. It was used for storage and distribution until the United States government took it over for aircraft training in 1917. Willys-Overland reoccupied the building in 1919 and for a time assembled cars there".*

*Of International, Mr. Ominsky's article states "In the building at 2572 University Avenue previously*

occupied by Willys-Overland Company, International Harvester built Six-Speed-Special trucks from January to October, 1929. Up to thirty trucks a day were produced at this facility".

As references for these items, Mr. Ominsky quotes the Minneapolis Journal, February 16, 1919, page 7, and a manuscript in the files of the International Harvester Company.

Nowhere in his article did Mr. Liszka claim that the list of Minnesota cars was complete. For that matter, we know of no author or compiler of rosters who has ever claimed that his list was 100% complete or accurate. If anyone can fill in any blank spaces or correct any errors in Ominsky's list (with references, such as Mr. Ominsky furnished) we will be delighted to publish such additions or corrections.

#### ANOTHER MYSTERY HUBCAP

HARRY PULFER, LA CRESCENTA, CALIFORNIA

Here is a photo of a mystery hubcap. I can't identify it, nor can SAH member Bruce Ledingham of Vancouver, B.C., who has a huge collection of hubcaps. This one stumps us. Can anyone tell us what make of car used it?



#### NEWS ITEM -

##### THOMAS B. JEFFERY COLLECTION ACQUIRED

The Los Angeles County Museum of Natural History, 900 Exposition Boulevard, Los Angeles, California, has recently acquired a unique collection of corporate records heretofore not known to have existed, documenting the business history of the Thomas B. Jeffery Company. Outstanding in the collection are documents relating to discussions between Thomas Jeffery and George Day, who was general manager of the A.L.A.M., concerning the Selden Patent; factory delivery records for all Rambler cars delivered from 1902 through 1905, a complete, minutely itemized inventory of the Jeffery factory at Kenosha, Wisconsin; and contracts with suppliers of parts for Rambler automobiles.

The Thomas B. Jeffery Company began its production of Rambler automobiles in 1902, and changed the product name to Jeffery in 1914. The original document recording

the sale of the company to Charles Nash on August 16, 1916, is also preserved as a part of the collection.

James Zordich, curator of the Museum's automotive history collection, arranged for the acquisition of the Jeffery Collection. Plans are now being prepared to publish a history of the Rambler automobile utilizing the research files in the Museum's collection, including this new primary material.

#### NEWS ITEM -

##### CANADIAN CHAPTER OF S.A.H. FORMED

A Canadian Chapter of the Society of Automotive Historians has been formed and is now functioning. In April, 1977, a group of nearly a dozen members of the S.A.H. and interested persons met at The Craven Foundation Museum in Toronto. After discussing the feasibility of a Canadian chapter, and projects to undertake, the meeting voted unanimously to seek authorization from the Board of the Society of Automotive Historians. That approval was promptly received from S.A.H. secretary Charles L. Betts, Jr. It is believed that this is the first chapter anywhere to be formed since the Society was founded in 1969.

Under the chairmanship of Lloyd Brown, a Projects Committee was formed, which has already held a meeting to get its work started. Historical information of any type, such as literature, newspaper clippings, press releases, photographs, films, etc. of Canadian made vehicles will be gathered. Also, information on the influence which the Canadian automobile industry has had beyond the borders of Canada is being sought. Not only passenger cars, but trucks, military vehicles, motorcycles and other self-propelled land vehicles are of concern to the Canadian Chapter.

It is expected that all of this material will be housed in the library of The Craven Foundation, 760 Lawrence Avenue West, Toronto, Ontario, but it will remain the property of the Canadian Chapter of the S.A.H. It will be kept separately from Craven material, and will be made available for use by S.A.H. members and other serious researchers. It is expected that this cooperative plan will benefit both the Society of Automotive Historians and The Craven Foundation.

Annual dues for membership in the Canadian Chapter are \$3.00 for Active Membership, and \$4.00 for Dual Membership (Active Member and spouse). Membership in the Society of Automotive Historians is a prerequisite for membership in the Canadian Chapter. Inquiries concerning membership in either the S.A.H. or the Canadian Chapter should be sent to Glenn Baechler, Membership Secretary, 307 Algonquin Drive, Waterloo, Ontario.

Anyone with Canadian automotive historical material to donate to the Canadian Chapter should contact Lloyd Brown, 4211 Yonge Street, Willowdale, Ontario M2P 1N6.



## ROBERT S. (Col. Sam) McLAUGHLIN

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Robert Samuel McLaughlin was born on September 8, 1871, at Enniskillen, Ontario, Canada, a village a few miles north of Oshawa.

His father, Robert McLaughlin - "The Governor", as his sons called him - was a farmer whose talent for wood carving led him into industry. He developed an exceptional talent for shaping axe handles, which he sold to other farmers. Some time after axe handles had become an established part of the McLaughlin farm production, he decided to try his hand at something more elaborate. Using an illustration in a catalog for guidance, he made a sleigh. A neighbor asked him to make another and soon Robert McLaughlin set up a blacksmith shop, hired an upholsterer, and began the manufacture of McLaughlin cutters and wagons.

The business soon outgrew the farm workshop, and two years after he had made his first cutter Robert McLaughlin moved to Enniskillen and set up a two-story factory. Within six years the business was too big for the Enniskillen factory, and in 1876 the McLaughlin Carriage Works moved into a factory in Oshawa.

McLaughlin's three sons went to school in Oshawa. Jack, the oldest, went on to study pharmacy at the University of Toronto and graduated a gold medallist. Later he founded the Canada Dry Company. George apprenticed at the carriage factory after leaving school. Sam, the youngest of the three, was hesitant about going into the plant after he graduated from high school, but loyalty to his father won out.

"I had no great urge to go into the carriage business", he wrote later. "I knew from George that apprenticeship with 'The Governor' was no rest cure. I thought I might like to become a hardware merchant. I thought of becoming a lawyer - I fancied I looked a little like one. I wanted to become a draftsman, and had taken a correspondence course in it. But when I wanted to go off and learn the profession seriously, 'The Governor' put his foot down. 'If I want a draftsman', he said, 'I can get a draftsman. I want you to stay here and learn the business' ". Heeding his father's wishes, Sam McLaughlin, in 1887, became an apprentice in this father's firm. He was 16 years old.

He started in the upholstery shop at \$3.00 a week, of which he paid his father \$2.50 for board. This was his salary for the next three years, during which time he learned to lay out jobs, stitch and sew. He also swept the floors and performed any other menial jobs that had to be done.

When he completed his apprenticeship he set out to broaden his knowledge of the business. He landed a job at the H. H. Babcock Company, a carriage factory at Watertown, New York, for which he received a journeyman's full pay - \$1.75 a day. From the Babcock plant he moved on to other carriage factories at Syracuse and Binghamton. When he felt he had learned all he could, he took his pay and headed for New York for a holiday. Some time later he returned to Oshawa with 50 cents in his pocket, "some pleasant memories", and a readiness to settle down to the business of making carriages.

In 1892, at the age of 21, his father took him and his brother George into the business as partners. Seven years later he had become chief designer for the firm, and had created 143 different designs for carriages and sleighs, all of which were being produced.

But in December of 1899, disaster struck. Fire destroyed the McLaughlin plant, along with all of the designs, raw materials, and partly finished carriages. So highly were the McLaughlins regarded in the province of Ontario that within a few days no less than 15 municipalities offered to lend them money to re-establish. One city even offered a cash bonus if they would move there.

But the McLaughlins wanted to stay in Oshawa. They felt a loyalty to the town in which they had been established for almost 25 years, and their loyalty was rewarded when the town offered to lend them \$50,000, to be repaid "when convenient".

What was to be done while the new plant was being built? There were 600 men, with families, out of work, and there were orders to fill - orders from buyers who wouldn't wait indefinitely and might turn to other carriage makers. "The Governor" gave his son, R. S., the seemingly impossible assignment of filling them - immediately and in quantity.

Young McLaughlin had to start from scratch - without designs, without machinery, without supplies and, most important, without a factory. He searched through Oshawa and the surrounding towns but there wasn't a factory to be found. He looked further afield. Finally, he found one in Gananoque and then sent for as many men from Oshawa as he could use.

He had a thousand and one details to look after. There was lodging for the men, which he secured by going from door to door in Gananoque asking residents to take them in. Machinery was needed to get the factory operating. He found it throughout the province, a piece here and a piece there. New designs were needed. He made these whenever he had a spare moment, which came infrequently.

Within a month after the fire, the temporary plant at Gananoque was in production. Within six months, 3,000 carriages had been turned out.

Some years later, recalling the Gananoque struggle, Mr. McLaughlin paid tribute to the men with whom he worked:

"The Gananoque operation confirmed my belief that the willing, conscientious worker is the backbone of any business."

By mid-summer, a new plant in Oshawa was opened. A year after the fire, the company was re-organized and became the McLaughlin Carriage Company Ltd. Sales soared to more than 25,000 vehicles a year and volume passed the million-dollar mark.

It was about this time that Mr. McLaughlin became acquainted with the motor car. A friend asked him to devise a top for his automobile that would keep out the rain and Mr. McLaughlin obliged. The friend offered him a ride in it, and from then on, McLaughlin reported later, he had "a new kind of wheels in the head". He was referring to a family saying which sprang up after he had been hit on the head by a wheel in his father's shop when he was a boy of five.

Several things influenced Mr. McLaughlin in making his decision to go into the car business. The coming of the automobile to the North American scene appealed to the enterprising mind of the young man. As a business man, he was among the first to realize that the fantastic machines sputtering jerkily along the bumpy roads, scattering horses, chickens and even humans from their paths with their frightful noise, would eventually replace the horse and buggy and revolutionize the world's transportation.

Robert S. McLaughlin saw in the motor car formidable competition to his carriage business. He was also a good friend of William C. Durant who held a similar view and who was doing big things with the automobile in the United States. Fifteen years before at a carriage convention McLaughlin had met the fabulous "Billy" Durant and he talked with him frequently at conventions thereafter. Much of this talk was about automobiles.

Mr. McLaughlin was able to sell his brother George on the future of the automobile, but "The Governor" remained unconvinced. The father agreed, however, to allow R. S. to go to the United States and investigate. Mr. McLaughlin talked with half a dozen car manufacturers. He saw Richard Pierce in Buffalo, who advised him against making cars as large as the Pierce-Arrow because of their limited market. He talked with E.R. Thomas, also of Buffalo, who was making the Thomas Flyer. And he visited the Peerless Company in Cleveland and the Reo works.

Then he called on Durant, who by now had bought the Buick Company. Durant's Buick was the only vehicle which fitted in with McLaughlin's conviction that the success of the motor car industry depended not on the high-priced machine which was beyond the reach of all but the most wealthy, but on a moderately-priced car which at the same time would meet his specifications of "one grade only, and that the best."

R.S. McLaughlin returned to Oshawa fully convinced of his next move. With his brother's help he convinced "The Governor" the McLaughlin Carriage Company Ltd. should go into the car business. Two years later the McLaughlin Motor Car Company was formed with R.S. McLaughlin its president.

He equipped one of the carriage plants with automatic lathes, planers, shapers, and countless other machines. From a Cleveland firm he ordered cylinders, pistons and crankshafts to his own specifications. Engine castings were worked in the Oshawa shop. But just when the operation got started, with 100 cars already on the assembly line, the chief engineer became ill.

Mr. McLaughlin wired Mr. Durant and asked if he'd lend him an engineer. Instead, Durant came to Oshawa himself, and on October 3, 1907, they signed a 15-year contract which provided that Buick was to supply the engines and the McLaughlin company would design and make the car.

The McLaughlin Company produced 193 cars the first year -- "quite a feat for a bunch of carriage-makers who were just cutting their teeth on automobiles," McLaughlin said later.

As he had done in the carriage company, Mr. McLaughlin himself designed the new automobiles and continued to do so until all-metal bodies were introduced many years later. His ability as a young business genius was soon recognized by his colleagues in the United States, and in 1910 he was invited into the General Motors Corporation as a director.

Meanwhile, Durant's Chevrolet was selling well in the United States. McLaughlin recognized the possibilities of the lighter, less expensive cars, and Durant proposed that McLaughlin Company make them as a second line of cars. There was, however, one obstacle -- the carriage company. In negotiating a contract for Canadian Chevrolet rights, McLaughlin knew that for financial and managerial reasons, the carriage company would have to go. Also, he was convinced that the automobile industry had finally made obsolete the graceful carriages and cutters.

With his brother's support, he approached his father and, surprisingly, the elder McLaughlin offered few objections. By his own admission "The Governor" had no interest in the "horseless carriage". He was getting on in years and leaving the running of the business to his sons. "I'm about through," he said, giving his consent. He died six years later.

The Chevrolet was as successful as the McLaughlin-Buick, and the fledgling auto company prospered. But by 1918 when the Buick contract was due to expire, Mr. Durant's Chevrolet company had become part of General Motors. He saw that GM would scarcely ask him to continue making just one GM model. "There were hundreds, almost thousands, of newly-formed car companies in the United States failing and going by the board," he wrote. "I could see the inside of the cup and I knew what it meant."

So, in 1918 McLaughlin went to New York and joined his motor car company with General Motors. "There were many reasons for selling -- personal, business and social," he wrote later. "My wife and I had been blessed with five daughters, but we had no son to carry on. George was anxious to retire; he had never been strong and he had worked hard all his life. George's sons had tried the business but had not taken to it. Those were the personal reasons.

"On the business side there was the fact that if we decided to stay in the automobile business, we would almost certainly have to make our own cars from the ground up. As I have said, I had managed to make an agreement with Buick that was too favourable to us for them to renew on the same terms - when the 15-year agreement was up. Chevrolet was now part of General Motors - their best seller - and we could scarcely expect GM to allow us to continue making just one of their models.

"Those were our business reasons. Equally important was the fact that McLaughlin's had become by far the largest employer in Oshawa. My father had always felt, and George and I had come to feel, that the business was as much Oshawa's as it was ours. If Oshawa's motor industry became a General Motors operation, expansion and employment opportunities were assured. If we had to venture into making a car of our own in Canada, failure and unemploy-

ment might well result."

The GM directors attached one condition: that Mr. McLaughlin and his brother stay on and run the business. R.S. McLaughlin became president of General Motors of Canada and his brother, George, vice-president, a position he held until his retirement in 1924. In that year, Mr. McLaughlin, then 53, himself decided to "ease off" and brought in K.T. Kellar as general manager. In later years Mr. Kellar became president of the Chrysler Corporation in the United States.

Mr. McLaughlin continued as president until the end of the Second World War, and he played an important part in converting the plant into a huge producer of war materials. At the outbreak of hostilities he wired the government offering the entire GM facilities in Canada to the government. In June, 1943, General Motors was the focal point of a celebration marking production of the 500,000th war vehicle produced by Canadian manufacturers. In addition to vehicles, guns of various types and calibres, gun mounts, shells and bomber fuselages poured off the General Motors assembly lines into the streams of Canadian war material being directed to the battle fronts.

Mr. McLaughlin added his characteristic light touch to the war effort when he stored his automobile for the duration and went to work each day in a horse and buggy.

Shortly after the war, McLaughlin had the only severe illness of his lifetime and asked to retire. He had often stated he would step down when he reached his 70th birthday, but when that date came Canada was at war and, realizing his debt to his country, he remained active head of the company. General Motors, however, was reluctant to lose him even after the war and persuaded him to stay on as chairman of the board of the Canadian subsidiaries and as a vice-president and director of the U. S. corporation. In 1967 he resigned from the board of directors after almost 50 years, during which he insisted on that "reputation for quality" which his father had built in the McLaughlin Carriage Company long before.

"Colonel Sam passed away peacefully in his sleep at his Parkwood home early this morning." So read the *Oshawa Times* of January 6, 1972. "He was in his 101st year, having celebrated his hundredth birthday last September the eighth."



This photo of a 1923 McLaughlin car was taken in Montreal, Quebec, in 1925, and was contributed by Mr. W. M. Wrigley, Atlanta, Georgia, whose family owned the car. Mr. Wrigley is the young gentleman seated on the tricycle at the left.



Colonel Sam McLaughlin, nearing his 100th birthday, stands beside this 1908 McLaughlin Model F. This picture appeared in a number of Canadian newspapers, and copies of it were sent to AHR by several SAH members.

The foregoing article about Robert S. McLaughlin was based on information contributed by S.A.H. members Glenn Baechler, Waterloo, Ontario; Perry Zavitz, London, Ontario; Bruce Ledingham, Vancouver, B.C.; and Lois A. Watson, Toronto, Ontario

# Studebaker

THE LAST DAY OF PRODUCTION  
AT SOUTH BEND

By John Ernst

*Reprinted by permission from "Turning Wheels", the monthly magazine of the Studebaker Drivers Club, Inc., P. O. Box 791, Oswego, Illinois 60543.*

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Studebaker Corporation built fine transportation for over 111 years in South Bend, Indiana. On Monday, December 9, 1963, the tragic news of the corporation's demise as a producer of cars and trucks in the United States saddened many Studebaker fans. Only 11 days later - Friday, December 20, 1963 - the last car rolled from the assembly line with "Merry Christmas" written on the windshield. But for the many thousands of Studebaker workers who probably had been associated with the grand old name for decades, it was the final day of work. What a Christmas present this was for the many who worked so hard!

On that last day of production only 108 Studebakers were assembled. Of that total 18 were (64S) six-cylinder cars and 90 were (64V) eight-cylinder cars.

The first car from the assembly line that particular day was a 1964 Daytona 2-door hardtop (64V-20,111) which was shipped to Salt Lake City, Utah. The first six-cylinder car to be assembled was a 1964 Commander 2-door sedan (64S-13949) and delivered in South Bend. The last six-cylinder car was a Taxicab 4-door sedan (64S-13967) built for the Red Bird Cab Company of Lexington, North Carolina.

The very last car made was an attractive 1964 Daytona 2-door hardtop equipped with the Jet-Thrust R-1 engine package and four speed transmission. The serial number for this particular car is 64V-20,202. No production ticket could be found as yet, but hopefully in the future it may be located and reproduced in "Turning Wheels". This car was shown on national television and is now in the Studebaker Historical Collection with less than 25 miles on it.

Of the 90 V-8's made on the last day, 31 were Gran Turismo Hawks. This was probably the highest production day for the "K" body cars of the 1964 model run. The last Jet-Thrust R-1 G.T. Hawk was 64V-20,162. As you can see from the production ticket, it would be a collector's dream to own such an automobile today. This would have been a beautiful example of this body style to be included in the Historical Collection, if Studebaker would have put it aside for such purposes. It is to be hoped that someone in the Studebaker Drivers Club has this car and is preserving the last R-1 Hawk. Incidentally, this car was shipped to Lakewood, New Jersey.

The very last G.T. Hawk (64V-20,197) was shipped to Alhambra, California. Hopefully, one of our Calif-

ornia members has this car. It would indeed be surprising if this car turned up.

After the last Hawk was assembled, the next four cars were built for the United States Government. All had been ordered one day after Studebaker announced its closing. One was a Challenger 4-door sedan (64V-20,198, and the other three were Challenger Wagonaires (non-sliding roof), serial numbers 64V-20,199, -20,200, and -20,201. All four cars were ordered with identical equipment, and all were shipped to Washington, D.C. These cars represent the last of South Bend production sold to the public.

Actually, automotive production at South Bend did not cease of December 20, 1963. On January 22, 1964, the first CKD units (knocked down form) were crated for shipment to Uitenhage, South Africa. All of these were V-8's (64V) and 331 were shipped. The first six-cylinder (64S) unit was boxed and ready for shipment to Haifa, Israel, on February 10. 331 units were also sent on this order, with the last one (64S-14279) boxed on March 10, 1964. After that date all of the Studebaker buildings and property were being prepared for disposal, which took many months.

For those interested in truck production, the last assembled was a 1964 Transtar 8E-28AX-9150 Mobile Home Transporter, which was shipped to Elkhart, Indiana. The assembly date for this unit was December 27, 1963.

At the Canadian plant in Hamilton, Ontario, production ended on March 17, 1966. The last six-cylinder car (C-134293) was an Olive Green 1966 Wagonaire, sold through Tothill Auto Sales in Lockport, New York. The last eight-cylinder model was a Timberline Turquoise 1966 Cruiser (C-534654) which was shipped to the Studebaker Automotive Sales Corporation in South Bend, for placement in the Studebaker Historical Collection as the last Studebaker made.

*AUTHOR'S NOTE: Now that you have this information, check the serial number of your 1964 Studebaker. You might just have one of those last-day-of-production cars. I am especially interested in any 1964 Hawks that might have a serial number higher than mine - (64V-20,141). If you do own one of the last-day cars, or know of the existence of one, please contact me so that I can make a listing of these cars. I will submit the list to the editor of "Turning Wheels" for publication in a future issue. Send the details to John Ernst, Route 2, Box 187, Riverview, Florida 33569.*

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Many thanks go to Mr. Carl Thompson for his diligent assistance in helping to supply much of the information needed to make this report.



# THE CRAVEN FOUNDATION

MUSEUM AND RESTORATION CENTRE

The following information about the Craven Foundation and photographs of the Museum have been contributed by Lois A. Watson, Librarian.

The Museum is located at 760 Lawrence Avenue West, Toronto, Ontario M6A 1B8 - Telephone (416) 789-3432

The formation of the Craven Foundation was announced to the Canadian public on June 21, 1972. This non-profit organization operates under a Federal Charter with its purpose being to maintain, restore and collect articles of cultural and historical significance to Canadians.

The Craven Foundation is financially supported by the manufacturers of the Craven Family of fine tobacco products. The first phase of the project was the collection of automobiles. The automobile has had considerable impact in our fast moving technological society. The automobile has played a major role in twentieth century history and also in the development of our country. Transportation has always been a major consideration in the evolution of a nation which is as vast geographically as ours. It is not common knowledge, but the automotive industry in Canada was quite large during the first few decades of this century. There were almost 100 automobile manufacturers in Canada.

The Craven Foundation collection ranks as one of the finest automobile collections in the world. Initially a collection of 50 cars was assem-

bled in order to create a cross-section of automotive history. An interesting point is that this first group of vehicles was assembled according to a blue-print. The Foundation knew in fact which cars it wanted prior to their acquisition. Most collections are assembled through random selection, usually over a considerable period of time.

The Craven Foundation Automobile Collection has since grown to 72 vintage vehicles. Attention is now focused on automobiles of Canadian manufacture, the idea being to relate the Canadian automotive industry to the industry as a whole.

The collection spans the years 1901-1933. By the mid 1930's, with the advent of the large corporation, engineering principles had become standardized. Carburetors, ignition systems and transmissions were virtually the same. That is to say, the pioneering era of automobile manufacture had ceased.

With early days of automotive history as our objective, it is possible to direct our efforts towards a superlative collection. The Craven Foundation functions as an instrument through which meaningful automobiles may be retained in Canada. To illustrate this point, the most recent acquisition to our collection has been a 1912 Atlas, an automobile which had its origins in Brockville, Ontario.



The collection is further enhanced by a group of 23 miniature racing automobiles created by Mr. Francis Mortarini of France, and an extensive display of artifacts.

After five years of operation, The Craven Foundation is engaged in a programme which included the following:

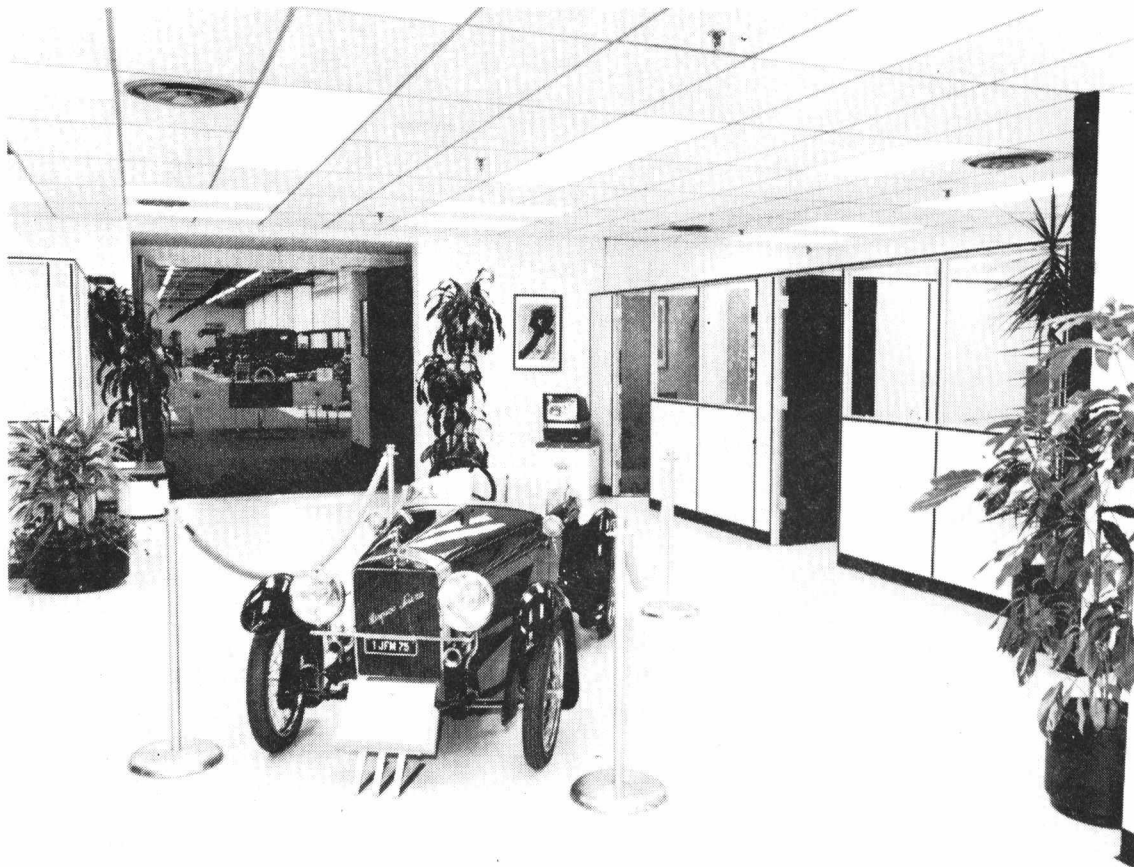
- A. A Museum facility operating on a weekly basis, which is also made available to the community as a meeting place for service groups and clubs.
- B. The restoration and maintenance of the vintage and miniature car collection.
- C. Four concurrent series of mobile exhibits across Canada.
- D. An Antique Automobile reference library, film library, and reading room for public use.

- E. An extensive involvement with the antique automobile community, and was instrumental in the formation of an Advisory Council. This group later formed The National Association of Antique Automobile Clubs of Canada, and started the production of Vintage Canada magazine assisted by the Craven Foundation for the first three years.
- F. The publication of a definitive work on the automobile in Canada, which bears the title, Cars of Canada - A Craven Foundation History.
- G. Limited involvement in International Vintage Auto Events - London to Brighton, 1973; Monte Carlo Rally, 1974.



↑ PART OF REAR SECTION OF MUSEUM

← OUTSIDE FRONT VIEW OF MUSEUM

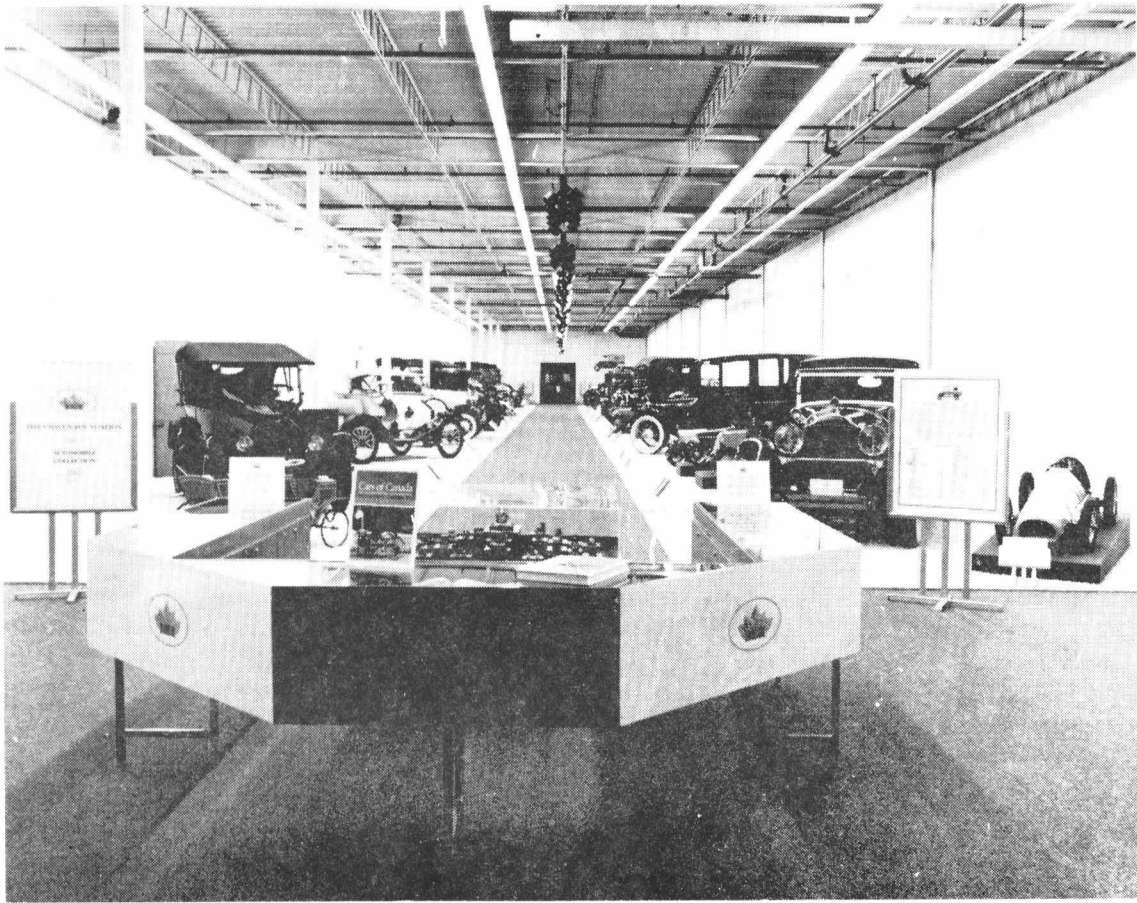


RECEPTION AREA

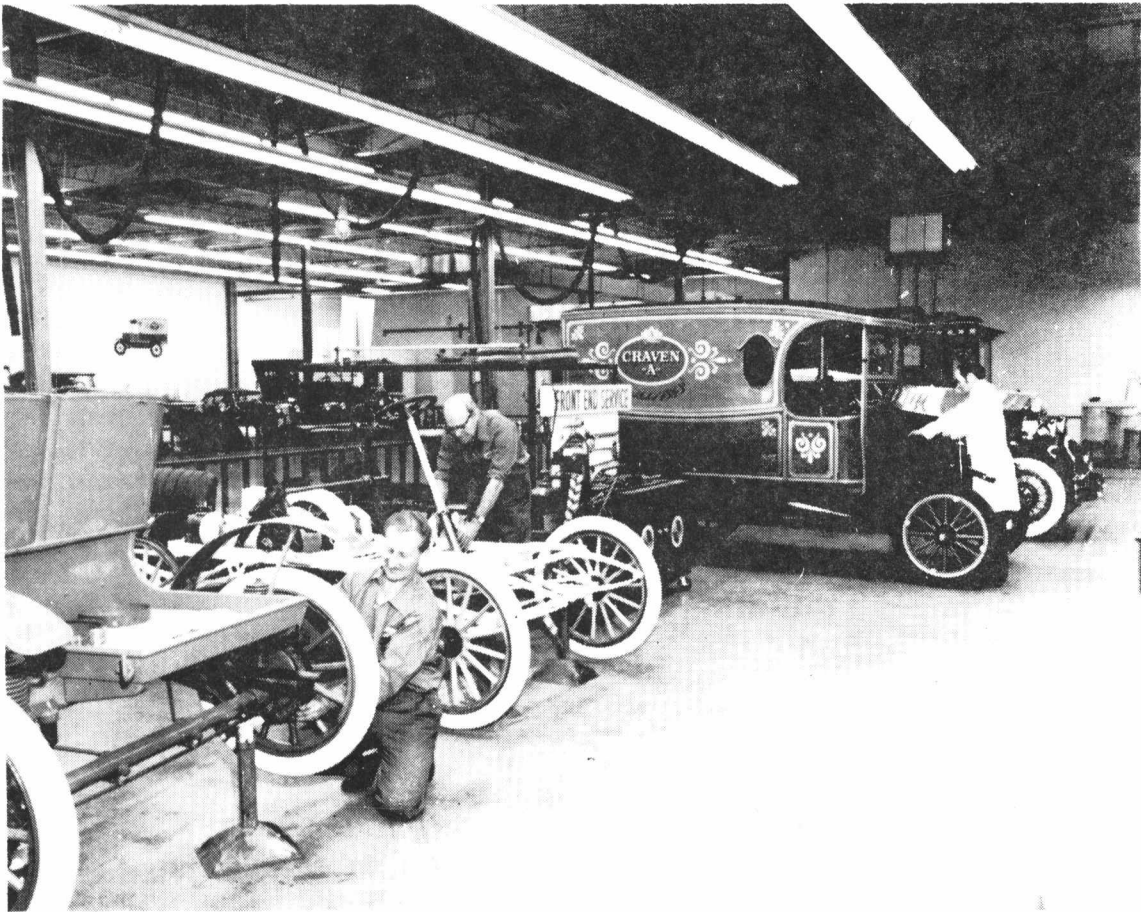


REFERENCE LIBRARY





FRONT VIEW OF FORWARD SECTION



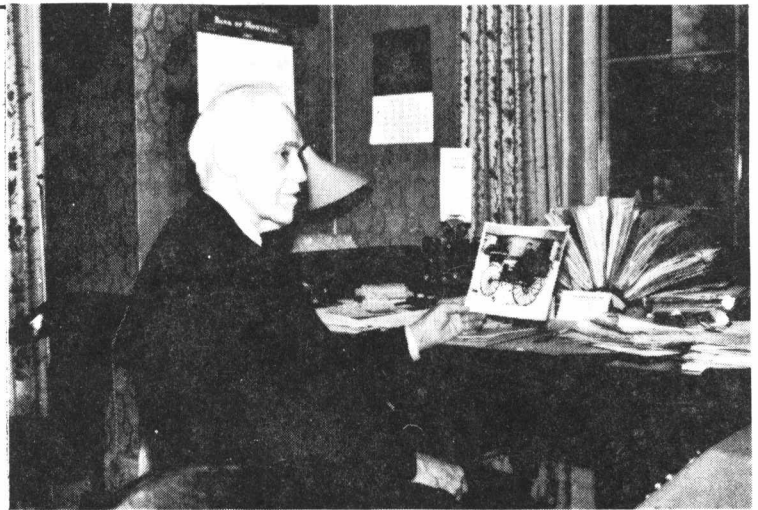
RESTORATION AREA

# Bill Gray

contributed by

R. PERRY ZAVITZ

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Bill Gray with a picture of the car he built in 1905

The following text is a condensation of an article by S.A.H. member Perry Zavitz, London, Ontario, which was originally published in the April, 1965, issue of THE REFLECTOR, the official publication of the Antique and Classic Car Club of Canada, under the title "An Afternoon with Bill Gray". Largely as a result of Mr. Zavitz' article, Bill Gray was invited to appear in a televised interview of about 20 minutes duration on CFPL-TV, London, mainly about his experiences in the Gray-Dort business, but also about his many other interests such as Rotary Club, Macaulay Club, Kent Nature Club, Industrial Commissioner for Chatham, etc.

In the following condensation we have omitted references to buildings, locations, and present occupants of such structures as are still standing, for these are of purely local interest.

Bill Gray was an honorary member of the Antique and Classic Car Club of Canada, and enjoyed the few meets he was able to attend. He died in October, 1971, at the age of 80.

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Bill Gray's father, William, settled in Chatham in 1853, and two years later founded a company to build wagons, carriages and bob-sleds. This was the start of an industrial enterprise from which Gray-Dort Motors, Ltd., evolved. It is possible that the Grays at one time were producing wagons before and in larger quantities than the Studebaker brothers. William Gray, with his son Robert, built a thriving business, turning out 15,000 vehicles a year. A merger with a Western Canadian manufacturer of fanning mills, farm scales, etc., resulted in the formation of Wm. Gray-Son-Campbell, Ltd.

The fourth person in Kent County to drive a car, Bill Gray showed a keen interest in automobiles. His father, Robert, bought him a 1903 curved dash Olds, which was shipped to Chatham on its side in a baggage car. This was followed by many other cars, which were thoroughly tested by Bill. He even built a car of his own in 1905. Robert Gray didn't view the automobile with too much enthusiasm at first, but eventually found himself buying new cars, driving them for a few months, then selling them at a profit. The Grays had the first Ford agency in Chatham. Later Wm. Gray-Sons-Campbell, Ltd., built bodies for Ford, including about 25 for the Model K.

Among the cars that the Grays sold was a Nyberg. They had the first curb-side fuel pump in Chatham; they opened a garage in 1912 where they sold Mitchell, McLaughlin-Buick and others.

The Grays and the McLaughlins were friendly rivals in the carriage business. When McLaughlin made an agreement with W. C. Durant to build the McLaughlin-Buick, the Grays decided definitely to enter the car manufacturing business also. They weren't jumping into it, however, without first making a thorough study. Bill and his father toured many auto plants in search of manufacturing knowledge - plus an agreement to build cars in Canada. They visited Chalmers in Detroit, Paterson and Dort in Flint, and Gardner and Moon in St. Louis. Bill Gray even worked for a time at the Gardner factory. Chalmers

seemed interested in the Gray proposal, but the final agreement, of course, was with Josiah Dallas Dort, a former partner of Durant in the Durant-Dort Carriage Works.

Wm. Gray-Sons-Campbell, Ltd., was reorganized under the name of Gray-Dort Motors, Ltd., with the Grays putting up all of the capital, though Dort received some shares. A royalty was paid to Dort for each car produced.

The first few Gray-Dorts were little more than unadulterated imports. After production began in the fall of 1915, Gray-Dort increased the use of Canadian parts. A target of 50% Canadian content was surpassed when the Gray-Dort was nearly 60% Canadian made. Canadian parts came from suppliers from Windsor to Oshawa. Gray-Dort used the Flo-Coat painting process, which may have been a first in the Canadian auto industry.

Gray-Dort cars sold for around \$1000. The price was not based on the cost of production, but on the price of the Dort in the United States, plus duty, less 10%. There was no basic design difference between the Dort and the Gray-Dort.

The Gray-Dort Special was strictly of Canadian origin. In 1918, Dort made a model change which caught Gray-Dort with a large stock of the former parts. To help use up this surplus, the Specials were produced. They featured maroon paint with fawn-coloured top, varnished wooden-spoke wheels, better grade leather upholstery, more nickel, and \$100 more in price. An amusing side-light of the Gray-Dort Special was that 200 were exported to the United States where, because of the odd assemblage of Canadian and American parts, the customs officials were thrown into wild confusion trying to determine the duty.

Factory branches were located in nine cities from Montreal to Vancouver, and at the peak there were at least 300 Gray-Dort dealers. As Chatham's largest industry, Gray-Dort employed 800 people.

Over 8000 cars were built in the company's best year, 1921. "That year", Bill Gray said, "there wasn't a cloud in the sky". Then, like a bolt from the blue, Josiah Dort told Robert Gray, Bill's father, "This is getting to be too much". He planned to pay off his creditors and go out of business. The strain of big business was more than this ultra-conservative wanted. No doubt other factors influenced Dort's decision; recent changes in the design of the motor caused vibrations which worried Dort. The impending closing meant an immediate drop in Dort and Gray-Dort sales. Would-be buyers, concerned about the availability of replacement parts, avoided what was suddenly all but an orphan. The Grays tried to dissuade Dort, but his decision was final. A few months later, Dort died while playing golf.

The Grays set out again for another company with which to associate. This time they called on Hudson and Gray in Detroit and Nash in Wisconsin. They made an agreement with the Gray Motor Corporation in Detroit. The similarity of name was purely coincidental. Before the Canadian Gray got into production, the Detroit Gray folded. After this, it was reluctantly decided to liquidate Gray-Dort Motors, Ltd. About 26,000 cars had been produced, and at one time the Gray-Dort outsold Chevrolet in Canada, even though it was higher priced.

When the Gray-Dort business was cleared away, Bill Gray organized a new company, Colonial Traders, to manufacture and/or distribute new and replacement car parts in Canada. Utilizing his many contacts made while manufacturing cars he soon had another flourishing business, though on a much smaller scale than the Gray-Dort operation.

Bill Gray aimed for retirement at 50, and as he approached this age he gave up his interest in Colonial Traders. But work for him didn't stop at 50, but continued until nearly 60. After leaving Colonial, he became Industrial Commissioner for Chatham. For eight years during the 1940's, he accomplished the amazing task of doubling Chatham's industries to 126.



# WITHOUT HORSES.

## GASOLINE CARRIAGE INVENTED IN LOS ANGELES.

The Trial Trip Satisfies All the Maker's Most Sanguine Hopes of Success.

## OVER BAD ROADS OR HILLS.

THE FIRST JOURNEY EARLY, ON SUNDAY MORNING.

It Carries Enough Gasoline to Run from Los Angeles to San Francisco—J. Philip Erie's Achievement.

A horseless carriage has been invented and built here in Los Angeles which has proved a success, and which promises to outrival in its ability to travel over bad roads and on heavy grades all its competitors hitherto invented.

The trial of the new gasoline-propelled automobile carriage took place early yesterday morning, when the streets were deserted except for a few sleepy policemen and wildly-careering milkmen. The trial trip was set for the "we, sma' hours" because the inventor, J. Philip Erie, knew that if it were at any less unearthly hour

the spectacle would attract a crowd which would interfere seriously with the progress of affairs.

For months J. Philip Erie, a wealthy New York civil engineer and inventor, who has of late been living in California on account of his health, has been working on his ideas for a motor-carriage. Over \$30,000 has been spent in the experiments. Almost every detail of the machinery had to be invented as the work progressed, and now that the machine is done, it is protected by over thirty separate patents.

At 2 o'clock yesterday morning the work began of getting the carriage out of the shop on West Fifth street, where it has been built. The carriage was pushed down the long alley, and out on Broadway. The gasoline engine was set to working, the machinery put in motion, and with a twist of the lever the first horseless carriage ever seen in Los Angeles moved off.

Then Mr. and Mrs. Erie and half a dozen guests climbed into the carriage. Down Broadway it moved, around the corner onto Sixth street, along the awful Sixth-street pavement so smoothly that the passengers scarcely felt any motion at all, south on Main street for a block, crossing car tracks and chuck-holes innumerable without any trouble, and then down the Seventh-street hill and to the east for over a mile, went the motor. When it came to a gutter, it rolled down one slope and up the other without the slightest trouble, rocks, chuck-holes and car tracks were as nothing up-grades and down-grades were no trouble at all, and in every way the vehicle satisfied the wishes of its inventor.

Mr. Erie's horseless carriage is run by gasoline. There are four cylinders. Before the machine was taken from the shop it was not supposed that one of the cylinders, working by itself, would be able to budge the machine. Yesterday morning only one of the cylinders was used, but in spite of that fact the vehicle ran with the utmost smoothness and ease. When the four cylinders are

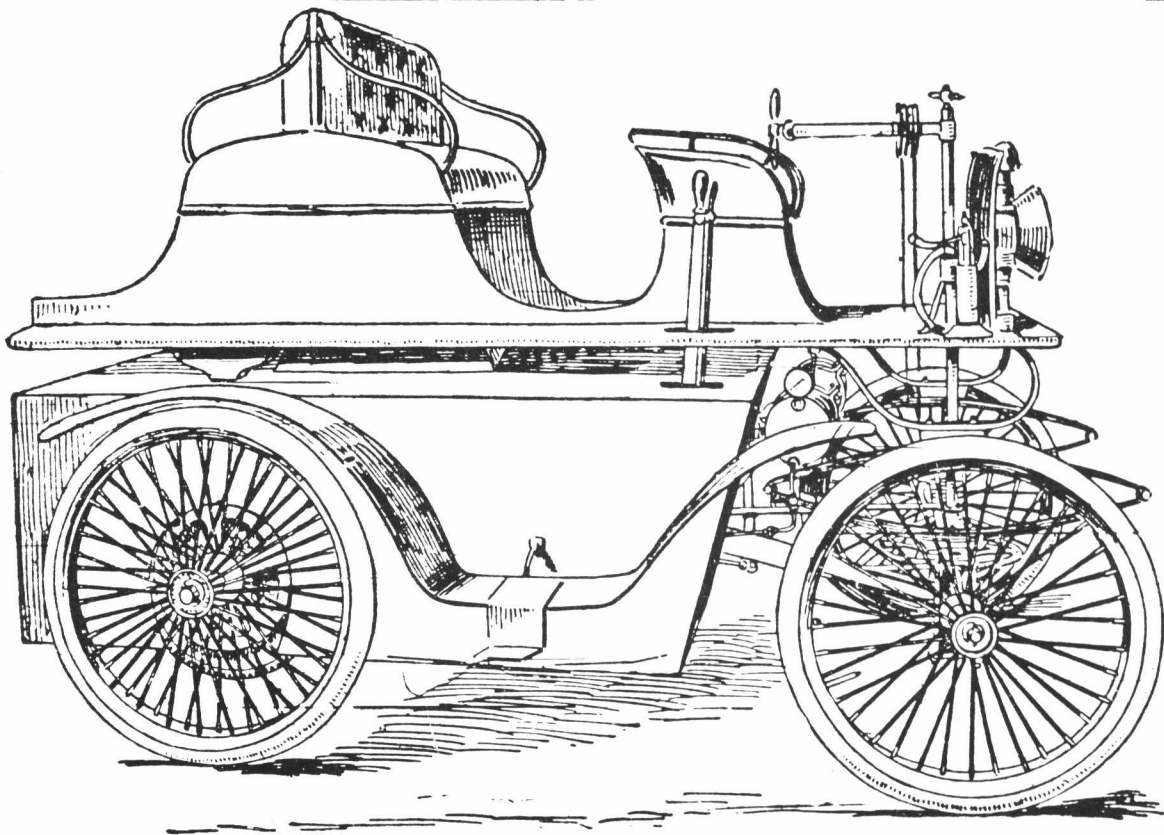
SAH member J. H. Valentine, Culver City, California, has sent this reproduction of an article from the Los Angeles Times of May 31, 1897, concerning the car designed by J. Philip Erie.

A newspaper photo of this car, published in the 1942 Auto Show Edition of the Milwaukee Journal, was sent to us by member R. A. Wawrzyniak and printed in the Viewpoint section of AHR No. 6.

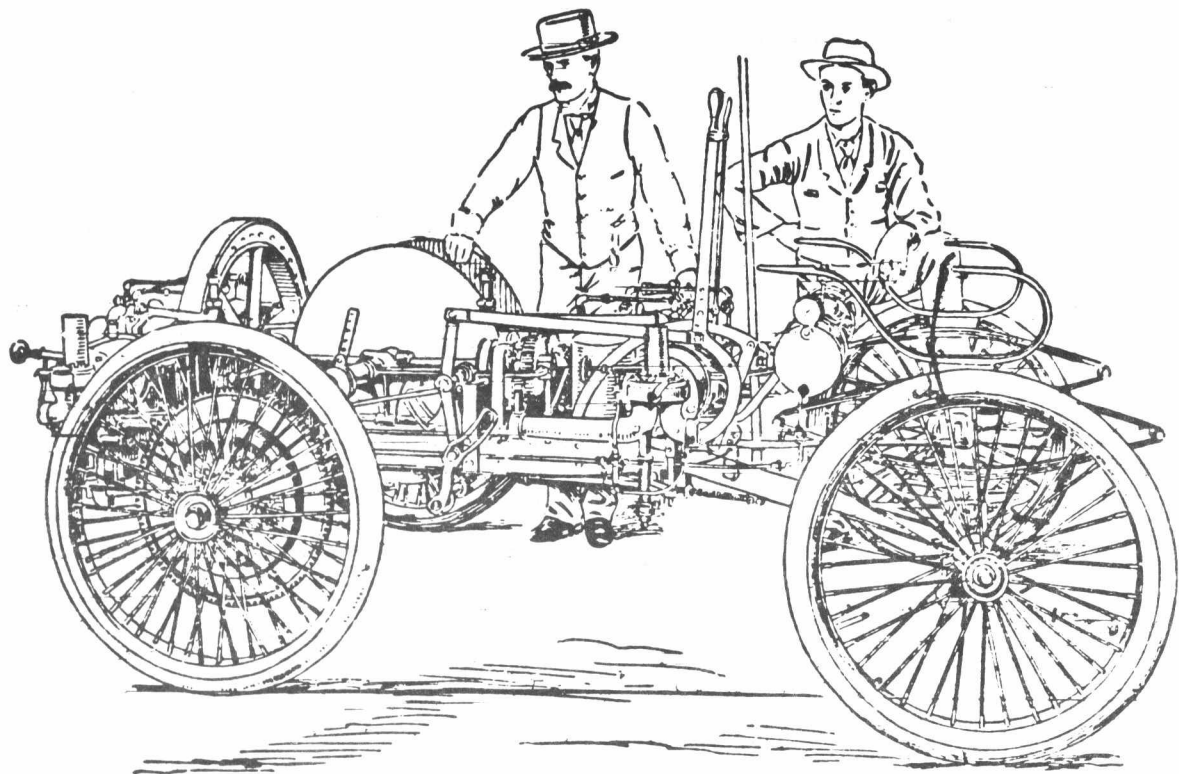
The columns of this article have been rearranged to fit our page size, and the type has been enlarged by 20% for better readability, this being a copy-machine reproduction of a newspaper page nearly 78 years old.

used, and that could have been done yesterday morning if it had been wished to do so, the machine will go at the rate of twenty miles an hour, without any trouble, and it is believed that because of the method of its construction, neither hills nor rough roads can interfere with its successful working.

The trial was a gratifying success in every way. One fear which had been felt beforehand was that the machine would scare horses, because of its unique appearance and because of the



THE NEW MOTOR-CYCLE.



THE MACHINERY OF THE MOTOR-CYCLE.

noise of the gasoline motors and the gasoline explosions. A number of teams were passed during the trial trip, but they showed not the slightest fear of the novel spectacle.

#### THE MOTOR WAGON.

In appearance the motor-wagon is not unlike a massive tally-ho. The body of the carriage is high above all the machinery, which is enclosed below in a black box. This box is lined with asbestos, giving perfect ventilation to the engines and preventing any heat from reaching the body of the carriage. The fumes of the gasoline are barely noticeable, being all below and behind the carriage, and nearly all noise is prevented by the device of making all gears alternately of wood fiber and steel. The wheels are of steel, with pneumatic tires in which the rubber, being an inch thick, is practically proof against punctures. The only part of the machinery that is visible is a polished copper cylinder underneath the front of the carriage, and the nickel-plated levers which are used to start and stop the machinery, or to operate the steering-gear.

In this trial carriage the space allowed for the machinery is much larger than is really required. The extra room was given to facilitate improvements and developments as the work progressed. In the other carriages which will be built upon this model the engine-case will be reduced in size by nearly one-third, thus removing all appearance of clumsiness.

Gasoline, naphtha or oil may be used in the motors of this carriage, and the motor itself is planned for use not only on road vehicles of all kinds, but also on street and other railroads.

Mr. Erie pins his faith to the gasoline motor for road vehicles for many reasons. It is economical in the beginning, for all that is required to run it is ordinary stove gasoline and not much of that. This wagon carries enough gasoline in its storage tanks to run three hundred miles, and could easily take with it sufficient fuel for twice the distance. If, by any chance, gasoline could not be procured in the course of a long driving tour, the tanks could be filled with ordinary kerosene, which does nearly as well.

Light weight and compactness of machinery is another advantage gained with the gasoline motor. The weight is

just about one-half of that required for a motor run by either steam or electricity, and the machinery is much simpler and more easily operated.

This innocent-looking black tally-ho has about twenty-five miles an hour concealed in its vitals. Its usual pace is expected to cover from seventy-five to a hundred miles a day, uphill and down, over gravel, mud or sand. None of the electric carriages manufactured carries sufficient power to run more than twenty miles on a smooth road, while on a heavy grade or a rough road the power is expended in less than half this distance.

#### THE MOTIVE POWER.

The arrangement of the motors and power in connection with this motor-wagon is simple and most effective. The body of the carriage is provided with a rear axle, or main-driving axle, and at the front with two pivoted axles, which are swung on their pivots by means of segments upon the axle, gearing with a gear wheel upon a shaft extending upward to the body of the vehicle, and provided with an operating handle. By this means a shorter turn can be made, and the front wheels can be kept better disposed so as to support the weight of the vehicle, than if they were upon an axle pivoted at its center. This handle also operates and sets the friction-rollers for increased power, required on grades, and by a reciprocating movement applies the brake. The axles are provided with wheels having heavy pneumatic or cushion tires.

The motors of the carriage consist of four gas engines, each pair arranged in line with each other, with the piston connected to corresponding cranks, so as to turn the main driving shaft, upon which is mounted next to the rear motors a small fly-wheel. Universal joints form the connections of piston-heads and rods. For adjusting the parts for starting, a small crank wheel is arranged in the rear of the carriage. In front of the vehicle and under the body is located the main supply gasoline tank. From this the gasoline is carried in small pipes to each cylinder independently, where, through valves specially constructed for this purpose, it is sprayed into a casing, and there mixed with air. This vapor is then carried directly into the cylinders. Automatic valves at the head of

each cylinder regulate the feed and exhausts. The charge is compressed in the outer chamber of the cylinders, and as the piston reaches the limit of its outward movement, the compressed charge is forced to the ignition chamber and exploded. The ignition tube extends into a casing, having a refractory lining, and is heated by a small flame from a suitably-protected burner. The exhaust ports are provided with independent mufflers, so that all noise is practically avoided.

By the arrangement of the engines in line a direct action of one upon the other is secured with less loss from friction, than when one operates upon the other through the intervention of double cranks of other connections, and the strain upon one is taken up by the other, while the whole structure is made more compact, and better balanced, than when the engines are arranged as usual, side by side at one side of the driving shaft.

One difficulty incident to the use of gas engines as motors for vehicles has resulted from the large quantity of water, and in some cases even ice, which it has been necessary to carry in order to maintain the cylinders of the motors at the desired low temperature. The volume of water in this carriage is reduced to an amount which can readily be carried without inconvenience by the use of a cooling device for carrying and spraying the water in contact with air over an extended cooling surface.

The motors are mounted on a steel frame, one pair with the fly-wheel located behind the rear axle; the other pair at the forward end of the steel frame. The disks and driving gears are located between the motors and in the center of the vehicle below the seats, thus securing a perfect balance. The steel frame and all machinery is supported by the axles, thus relieving the body of the vehicle from all strain and weight. Motion is transmitted from the main driving shaft to the counter-shafts parallel thereto, by direct gears. Upon these counter-shafts move the friction rollers, engaging the main driving disks. These disks are fastened to shafts which engage the compensating gears. The friction rollers are so arranged that they will operate the disks in either direction. If the friction rollers occupy a position at the periphery of the disk, it will move

at a slow rate of speed, and in proportion as the friction rollers are carried toward the center of the disk, the speed of the latter is increased.

To secure the desired frictional effect a frame is operated directly upon the friction rollers. The friction rollers are moved by vibrating arms fastened to rock-shafts. The rock-shafts in turn are operated by one lever, placed convenient to the operator in front seat, which, with the operating handle described above, absolutely controls all motion of the vehicle.

In order to avoid undesirable friction and wear upon the wheels in turning a corner or when traveling in a curved course, the driving wheels are provided with the compensating gears mentioned

above, so that the inside wheel will accommodate itself to the resistance and turn more slowly, and the outside wheel turn more quickly, without any control or adjustment of the parts by the operator.

The majority of the bearings in the vehicle are provided with roller and ball bearings, which require no oil, and practically annihilate friction. Smaller bearings, not so provided, as well as the cylinders, are supplied with oil by an automatic apparatus, which avoids the necessity of oiling each part individually. A similar apparatus controls absolutely the minute feed of the gasoline, thus doing away with all possibility of any accidents.

It is now nearly two years since the automobile carriage sent out through the city last night began to take shape, first in the fertile brain of J. Philip Erie, and then in iron and steel, under the skilled hands of S. D. Sturgis, who has worked with Mr. Erie at the machine ever since the first plans were drawn. Another partner in the scheme is C. H. Albers, ex-president of the Merchants' Exchange of St. Louis.

This is the first motor carriage ever built west of the Mississippi River. In all probability it will not be long before a factory is established in Los Angeles for the manufacture of motor wagons.

The following items, also contributed by Mr. J. H. Valentine, appeared in the Los Angeles Times during the first week of June, 1897.

### TESTING THE CARRIAGE.

#### The Horseless Carriage Will Go to San Bernardino.

The slight defects shown in the construction of the new horseless carriage built in Los Angeles by J. Philip Erie and S. D. Sturgis are being remedied, and within a few days it is thought the new invention will be ready to go into active service to do its part in the work of emancipating the horse from bondage.

The horseless carriage was for the first time taken from the shop on West Fifth street in which it was built last Sunday morning at about 1 o'clock. It was really scarcely ready for the test. Only one of the four cylinders was used, but in spite of this the carriage went smoothly and easily for several miles, carrying a load of ten people. It passed along Seventh street down toward the river, it climbed the slope of the First-street bridge, it rolled lightly up the First-street hill to Boyle Heights, and on over the uneven roads to Mr. Erie's house on the corner of East Fifth and State streets, near Hollenbeck Park. The trial succeeded beyond any previous hopes.

There was one difficulty. Certain parts of the machinery were wrapped in what had been sold as asbestos. The stuff burned out like brown paper. It was found impossible to get genuine as-

bestos to replace the sham without delay, and so a change has been made in the machinery which makes the use of asbestos unnecessary.

By this afternoon it is thought everything will be ready for another trial trip, this time by daylight. The four cylinders will probably be in complete working order. Late this afternoon the carriage will be taken out from Mr. Erie's home and run over the hilly roads of Boyle Heights in the vicinity of Hollenbeck Park. It will be given a severe test on bad roads and steep ones.

Friday morning the gasoline carriage will make its first public appearance on the streets of the business quarter of the city. It will be run through Boyle Heights to Alliso street, down Alliso street to Main, south on Main street at a rapid pace, and then to Pico Heights, to the home of Mr. Sturgis, the foreman in charge of the work. Then it will roll back to Boyle Heights.

The severest test of all will begin on Saturday or Sunday morning. The carriage will be taken to San Bernardino and Redlands. For five or six days it will be used without intermission over the steepest and worst roads that can be found in all the valley, and if the carriage has flaws, they will be found out.

### SPEED TRIAL POSTPONED.

#### Defective Steel Delays Trying the Horseless Carriage.

The new gasoline carriage built by

J. D. Sturgis and J. Philip Erie, which received its first test last Sunday morning, will not be used again for a week. Four small pieces of steel, none of them as large as a man's thumb, are the cause of the delay. Steel bought in Los Angeles was used for these parts in building the carriage. This metal has proved defective, and a telegram has been sent to Homestead, Pa., where the best steel is made, for steel to replace the defective parts. No changes whatever will be made in the plan of the machinery before the next trip. The only alteration is the replacing of the defective, faulty steel with honest material. Before the test is made of a long country run, and of hill-climbing and high speed, the inventors want to be sure that everything is in apple-pie order, for they don't want any breakdowns after the start has been made.

The availability of pneumatic tires for an automobile carriage received a severe test on the morning of the trial trip. The carriage was run over a lot of glass bottles. The weight of the vehicle smashed the bottles, but the sharp glass merely slightly scratched the smooth surface of the seven-eighths-of-an-inch-thick tires.

Until the steel pieces, which are for the piston-heads in the cylinders, come from Homestead, the carriage will rest in a barn near Hollenbeck Park, protected from fog and dew.

In connection with the foregoing news items, Mr. Valentine writes as follows:

The 1897 ERIE photograph accompanying the letter on page 4 of issue No. 6 is one from the Historical Collections, Security Pacific Bank. The W. H. Workman mentioned below the picture is William H. Workman, Sr., president of The Workman Company, a real estate firm. City directories of the time sometimes list him also as a horticulturist. The May, 1897, Los Angeles City Directory, lists Meredith P. Snyder as mayor. The previous mayor was Thomas E. Rowan. If Mr. Workman was formerly mayor, it was some time prior to 1894. A history of the city mentions the failure of a Temple & Workman Bank, "by which so many lost".

The ERIE auto was built in the S. D. Sturgis & Bro. Machine Works at 208-210 West 5th Street in Los Angeles. James Philip Erie had come west from New York for his health in about 1895. He and his wife resided two miles east of the Sturgis works in Boyle Heights at the intersection of East 5th and South State and Cummings Streets, about

where the Golden State Freeway passes Hollenbeck Park today. After the ERIE auto experimentation was over, Erie formed the Erie Pneumatic Hub Company with some new partners. Sometime in 1899 or 1900 his health must have improved, as he returned to New York City. Most city directories of the time listed him as an electrical and mechanical engineer, but the 1899 edition referred to him as a mining inventor.

Mr. Erie, according to the May 31, 1897 article, had his design protected by "over thirty patents". Yet in a search of patent files for the period 1885 through 1910 I found only ten in his name, the earliest applied for in March, 1897. It was for a bottle stopper! Of the rest, one was automotive-related. It was for a wheel design, was applied for a year after the car was shown, and was far more sophisticated than those used in the published picture and drawings. The other eight patents were electrical in nature and were non-automotive applications. Some were assigned to his Erie Exploration Company, New York, which may have explored little more than the world of electricity.

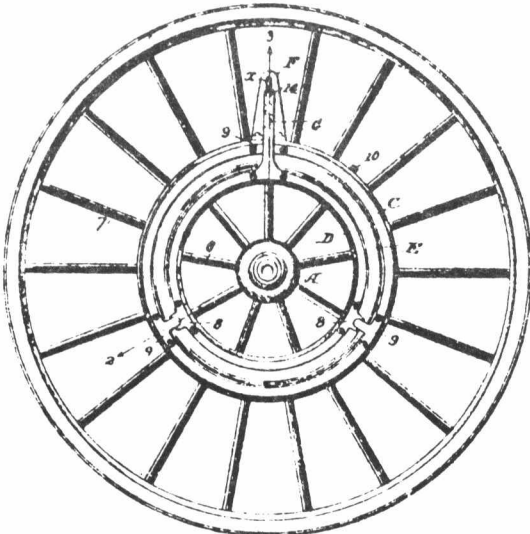
An article in the May 30, 1977 issue of the Los Angeles Times commemorated the 80th anniversary of the great occasion. Writer Dale Fetherling reprinted the usual picture of the auto, and in a brief redo of the original article mentions "Erie took out 30 patents..".

Samuel D. and William W. Sturgis were in the machine shop business at several locations within the northern downtown Los Angeles area for many years. An 1899 ad mentions "Gasoline Engines of all Kinds Repaired and Built to Order. Special Attention Given to Designing Boat and Motor Vehicle Engines." From 1894 through 1905 I was unable to find any mention of autos and trucks offered for sale, or of them offering to built them on special order. I found no listing in a category not machine shop or foundry-re-

lated. Yet they did, according to Automobile Quarterly's "1775" book, build both STURGIS autos and trucks. "This Was Trucking", a 1966 truck nostalgia book by Robert F. Karolevitz, shows two views of a very clumsy flat-bed truck by Sturgis', its huge steering wheel a great plea for power steering. The pictures were courtesy of the Los Angeles County Museum and were indicated as 1905 shots. Samuel Sturgis eventually got into the elevator business, the first indication of electrical expertise. The only patent issued to him through the automotive period was one for a shop machine design.

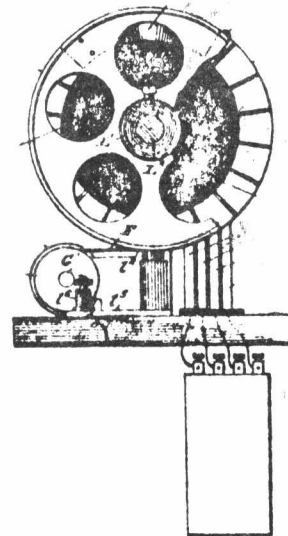
Mr. C. H. Albert, another "partner in the scheme" mentioned in the early newspaper article, does not appear in the city directories of the time.

678,390. WHEEL FOR VEHICLES. JAMES P. ERIE, Los Angeles, Cal., assignor to the Erie Pneumatic Hub Company, same place. Filed May 12, 1898. Serial No. 680,476. (No model.)



*Claim.*—In a vehicle-wheel, the combination of the hub and the rim, with two concentric rings located between the hub and rim, spokes connecting the inner of said rings with the hub, spokes connecting the outer of said rings with the rim, an elastic cushion fitted between said rings, overlapping plates 8 and 9 secured to the respective rings, said plates being free to slide one upon the other radially, a slotted plate F rigidly secured to one of said rings, an arm G rigidly secured to the other of said rings and a stud 14 on the arm G projecting through the slot in the plate F, substantially as set forth.

673,391. CURRENT-REGULATOR. JAMES P. ERIE, New York, N. Y., assignor to the Erie Exploration Company, same place and Dover, Del. Filed Jan. 4, 1901. Serial No. 42,099. (No model.)



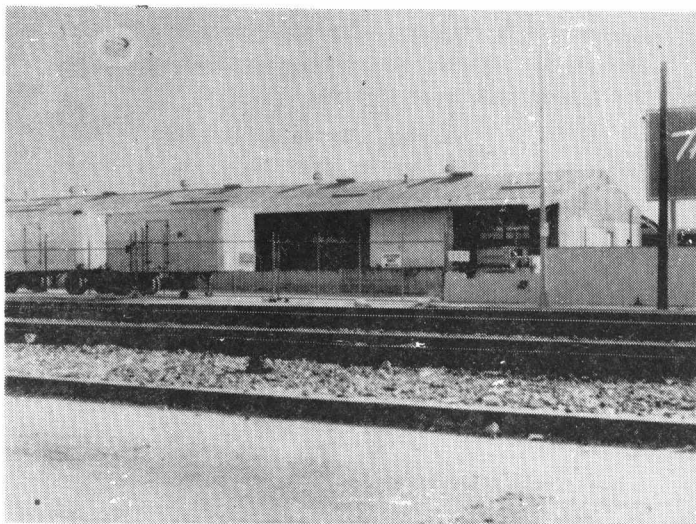
*Claim.*—1. A current-regulator, comprising a movable series of segments, a flexible-band contact connected to one of the segments, and means for bringing the band into engagement with or disengaging it from the segments progressively, substantially as described.

2. A current-regulator, comprising a rotatable disk having a series of segments, a flexible contact connected to one of the segments, and means for holding the flexible contact under tension, whereby the flexible contact may progressively engage more or less of the segments progressively, substantially as described.

3. In a current-regulator, the combination with a disk having a series of segments, of a flexible contact one end of which is connected to one of the segments, a drum under tension to which the other end of the

## As They Are Now . . .

These two pages of photos of early California automobile manufacturing plants as they appear today, and the information in their captions, are a contribution of S.A.H. member J. H. Valentine, Culver City, California.



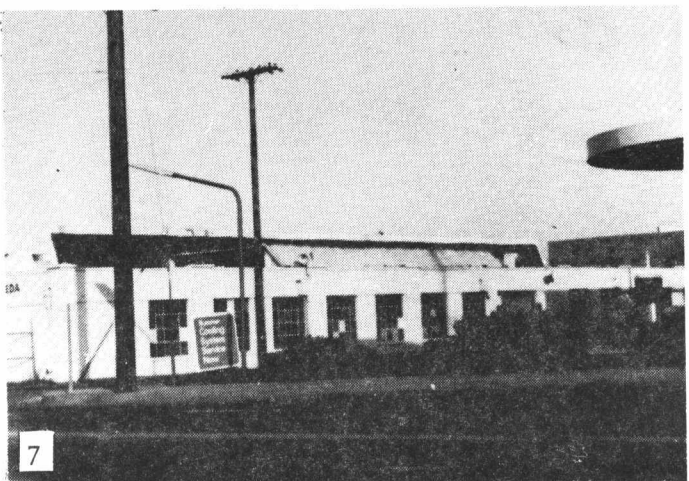
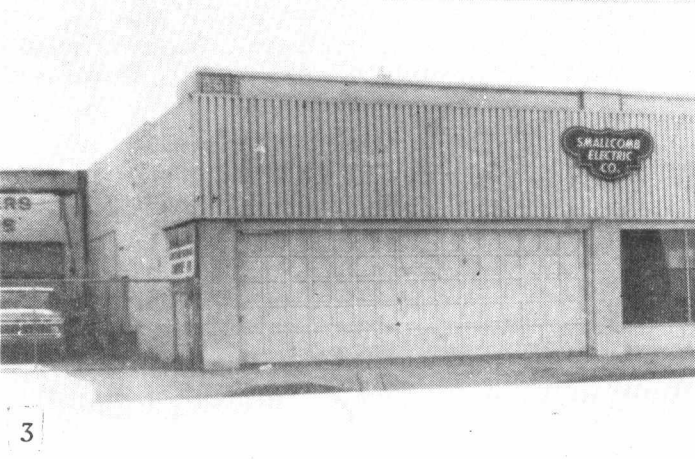
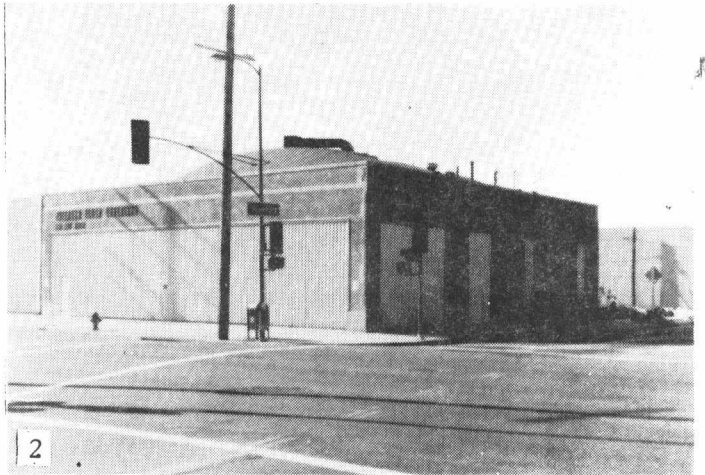
Homer Laughlin Engineers Corp., 1915 to at least 1918; Harry A. Miller Manufacturing Co. (later Harry A. Miller, Inc.), 1922 to 1930, at 2652 South Long Beach Avenue, Los Angeles. Laughlin built his front wheel drive HOMER LAUGHLIN V-8 auto here, later turning out automotive accessories only. Miller built carburetors here, later his famous MILLER front wheel drive race cars.



Leach-Biltwell Motor Company, 1035 South Grand Avenue, Los Angeles. Much-remodeled home of the LEACH automobile, this three-story brick building was used by them in 1920 and 1921.

1. Mission Motor Car Company, 1312 South Grand Avenue, Los Angeles. This one-story brick building was used in 1914 and 1915 by the builders of the MISSION and CRESCENT.
2. Curtis Manufacturing Company, 902 East 9th Street, Los Angeles. A one-story brick building used by the designers of a proposed truck that may never have been built. Vice President Harry A. Curtis took his ideas to Oakland, California, to participate in the Bill Motors Company. They built CURTIS-BILL front wheel drive trucks and buses, 1933-1934.
- 3,3A Electrical Construction Company, Inc., 1126-1130 South Main Street, Los Angeles. An electrical supply and contracting firm which built automobiles, presumably electric, for a short time.
4. Electra Manufacturing Company, Inc., 1333 South Main Street, Los Angeles. A one-story brick home for the ELECTRA automobile in 1915.
5. Beardsley Electric Company, 1250 West 7th Street, Los Angeles. From 1914 to 1917, offices and showrooms for the BEARDSLEY ELECTRIC were in this two-story brick building.
6. Moreland Truck Company, 1701 North Main Street, Los Angeles. This odd-shaped one-story building housed the MORELAND truck factory from 1912 to 1920, sandwiched between Wilhardt Street and the Los Angeles River.
7. Moreland Truck Company, 923 East San Fernando Boulevard (at Alameda), Burbank, California. Moreland was here from 1921 through 1942, its last years as a FEDERAL truck outlet as well as producing its own.





# 1907-1977

## Highlights of General Motors of Canada

**1907**—McLaughlin Carriage Co. signed 15 year contract for use of Buick automobile engines.

**1908**—McLaughlin Carriage Co. and McLaughlin Motor Car Co. produced carriages, sleighs and motor cars. Mechanical development was left hand steering. Employment 300.

**1911**—Battery operated self-starter introduced.

**1915**—McLaughlins formed Chevrolet Motor Car Co. of Canada to produce Chevrolet 490. McLaughlin Carriage Co. sold after building 270,000 horse drawn vehicles.

**1918**—McLaughlin Motor Car and Chevrolet Car Companies merged into General Motors of Canada, Limited.

**1920**—Adjustable front seat patented at General Motors of Canada. Oldsmobile added to Canadian production.

**1921**—Canadian Products Limited was organized at Windsor to produce engines and axles for Oshawa production lines. World's first stop lights appeared on Oshawa-built cars. Oakland car introduced.

**1923**—First balloon tires made appearance; four-wheel brakes were perfected; duco-lacquer paint introduced and Alemite pressure lubricant appeared. Cadillac car added to Oshawa production. GMC truck assembly started.

**1926**—Pontiac introduced.

**1927**—LaSalle introduced.

**1928**—Truck production was transferred to Windsor plant.

**1929**—Total production 104,198 cars and trucks. Employment 8,200.

**1930**—Markets collapsed and business depression of 1930's set in. Employment 4,600.

**1931**—Production of Oakland car discontinued; LaSalle discontinued in Canada; Buick introduced its first 8-cylinder

engine. Mechanical developments were numerous in succeeding four years — No-draft ventilation in 1933; knee-action suspension in 1934 and all steel turret tops appeared in 1935.

**1935**—LaSalle discontinued in Canada. Cadillac production in Canada discontinued in 1936. Employment 5,300.

**1939**—War in Europe. Experimental work on military vehicles began and first army trucks produced in 1940.

**1941**—Windsor plant produced machine guns and navy gun mounts; first armoured vehicles produced at Oshawa.

**1942**—Civilian vehicle production ceased; tank hulls produced.

**1943**—Production of Canada's 500,000th fighting vehicle celebrated at Oshawa. First Mosquito airplane fuselage reached production of one a day.

**1945**—Post-war automobile and truck production started. Demand for cars and trucks saw production and employment rapidly increase during following years.

**1949**—General Motors Diesel, London, Ontario started producing Diesel-electric locomotives.

**1950**—Plant expansions at Oshawa and zone-warehouse expansion across Canada during following four years were rapid to meet the market demand for cars and trucks and service parts. Employment 11,000.

**1952**—Central automotive parts and accessories warehouse began operations at Oshawa. Frigidaire Products of Canada plant in Scarborough opened to produce appliances.

**1954**—Passenger car assembly began at new South Plant complex in Oshawa.

**1956**—Three millionth vehicle produced since 1907.

**1960**—Buick Special and Olds F-85 series introduced. Employment 16,000.

**1961**—Four millionth vehicle produced. Chevy II and Acadian introduced.

**1963**—Chevelle and Beaumont series

produced. Automotive components manufacturing started at Scarborough plant.

**1964**—Plant expansion valued at \$120,000,000. Announce new plants at Oshawa, Windsor and Ste. Therese West, Quebec.

**1965**—Five millionth vehicle produced. Canada-U.S. Auto Trade agreement signed resulting in extensive plant and product realignment in 1966. Employment 19,000.

**1967**—Six millionth vehicle produced in October at Ste. Therese plant.

**1968**—Plastic moulding facilities expanded. Employment 20,000.

**1969**—Seven millionth vehicle produced. Major operating subsidiaries of GM Corporation in Canada consolidated to form General Motors of Canada Limited with head office in Oshawa.

**1970**—Termination of appliance business in Canada.

**1972**—January 6, at the age of 100, R. Samuel McLaughlin died. Ste. Therese, Quebec plant converted to Vega production. Eight millionth vehicle produced in Canada.

**1973**—New cold weather test facilities at Kapuskasing opened. Two millionth truck built at Oshawa. Sale of section of West Plant, 2.5 acres, for downtown redevelopment.

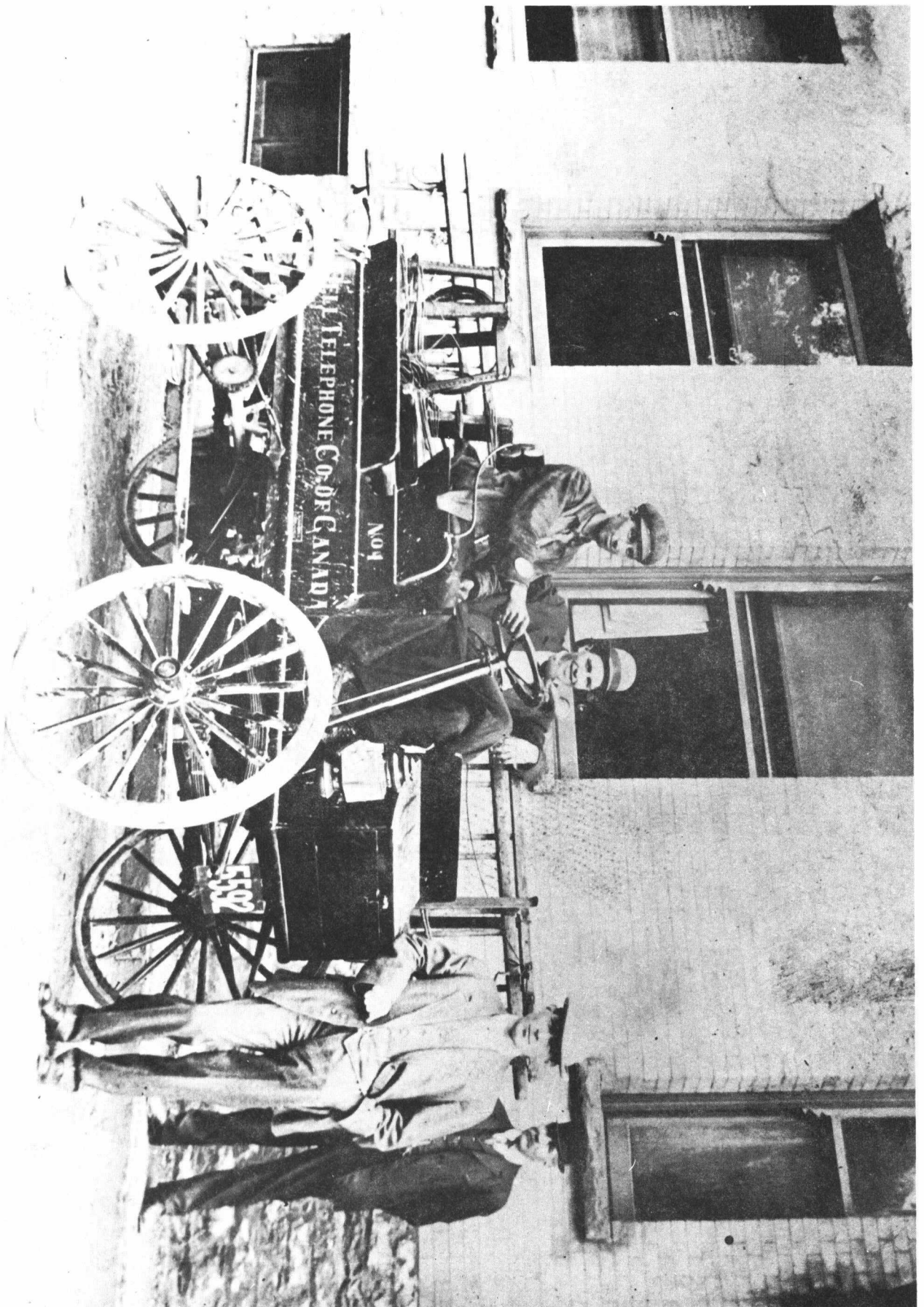
**1974**—Nine millionth vehicle produced in February. GM of Canada employment 29,100. Record production year. Monza 2+2, Skyhawk, Starfire produced at Ste. Therese.

**1975**—Ten millionth vehicle produced in November. New Parts Distribution Center under construction in Woodstock.

**1976**—Record year for production 731,765, employment 31,600, and payrolls \$586 million. Fullsize models redesigned for fuel economy and passenger comfort.

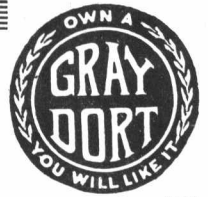
### GENERAL MOTORS OF CANADA LIMITED

OSHAWA, ST. CATHARINES, WINDSOR, SCARBOROUGH, LONDON AND STE-THERESE WEST, QUE.



# GRAY-DORT

"The Quality Goes Clear Through"



## A Sincere Car

WHAT more can be said of a motor car than that it is sincerely built—that honest material and honorable workmanship are joined with wise engineering in its construction? Such a car is the Gray-Dort.

Over a half-century ago the Gray institution was founded on just such a basis. We believed that growth, stability, ultimate profit were all dependent on giving value to our customers. The size and reputation of the Gray business to-day bears us out. The almost instant success of the Gray-Dort car is the result of a continuation of that policy.

It is a car sincerely designed to give great value. It is a car of character.

The new Gray-Dort embodies all the good features that won instant success for former models. The 4-cylinder motor is a triumph of smooth, economical speed and power. The chassis is sturdy and quiet. The springs are long. The upholstery is deep. The equipment is absolutely complete from electric starting and lighting to the tools. New lines of beauty have been given this model.

**Dealers in  
Every Locality**

*The five-passenger touring car is \$1,125; the three-passenger fleur-de-lys roadster is \$995; the Gray-Dort Special, beautifully finished and with extra details of equipment is \$125 above the list. All prices are f.o.b. Chatham.*

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CHATHAM, ONTARIO

*In the United States*

**The Dort Motor Car  
Company  
FLINT, MICHIGAN**

