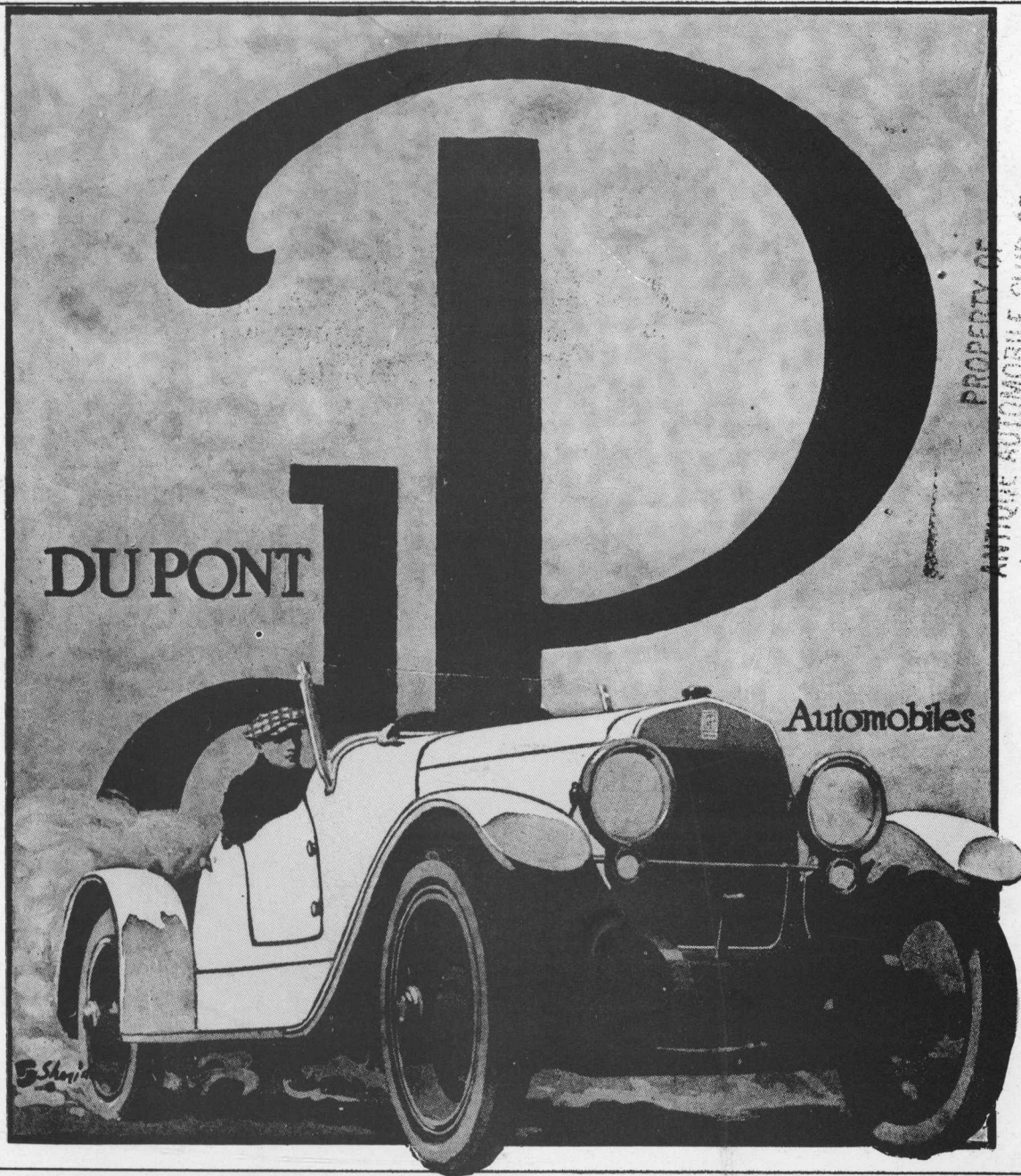


The Society of
Automotive
Historians

AUTOMOTIVE HISTORY REVIEW

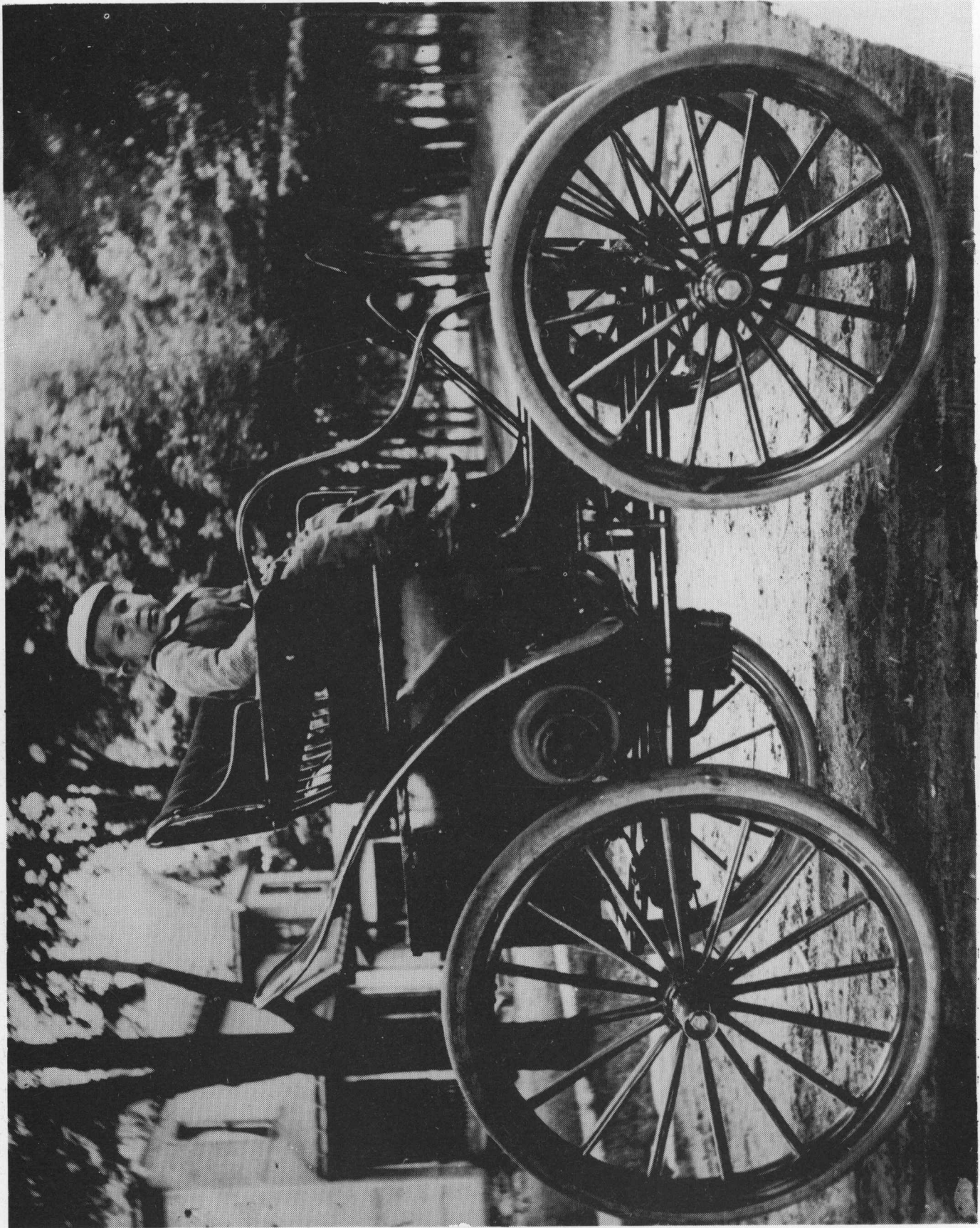
SPRING 1985

ISSUE NUMBER 18



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A PUBLICATION OF THE SOCIETY OF AUTOMOTIVE HISTORIANS, INC.



The first Elmore prototype, built in Clyde, Ohio, in 1899. The somewhat apprehensive little boy is James Howard Becker, grandson of Harmon V. Becker who founded the Elmore Bicycle Company, predecessor of the Elmore Manufacturing Company.
Photo from the collection of John A. Conde.



EDITOR

Richard B. Brigham

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AUTOMOTIVE HISTORY REVIEW

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du Pont Speedster

This picture was reproduced from a 1920 advertisement. Built in limited quantities on an irregular schedule, these high-quality cars were produced from 1920 to 1932. Only 537 of them were made.

Front Cover

Elmore Prototype

Ten of these 1899 cars were made. Eight were sold, then recalled and scrapped because of poor quality. Production resumed in 1901. General Motors bought the company in 1909, ended production in 1912.

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Letters

All of the letters in this issue comment on the Dino article in Issue No. 17, and all are favorable. Now we need articles on foreign cars and cars of the 50s and 60s. Get busy, SAH authors!

4

1931 du Pont Phaeton

This beautiful, award-winning du Pont phaeton is one-of-a-kind; the only phaeton that du Pont Motors, Inc., ever built. The car still exists, now owned by SAH member Richard Riegel, Jr.

6

Coventry's Motor Mills

A story about the birthplace and beginnings of the English Daimler in 1896, which began as a typical horseless carriage, but grew to become one of England's finest luxury cars.

8

Identification—At Last!

A chance seating with Bruce Ledingham, of Delta, B.C., Canada, at the October 1984 SAH annual banquet led to the identification of a car about which AHR inquired ten years previously (Issue No. 2).

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Foreign-bodied Stutz Cars

A photographic trip to Europe to look at cars with special custom bodies, all built in England, France, Belgium and Germany, and all mounted on Stutz chassis of 1928 to 1933.

12

Some Cars of the Presidents

President Theodore Roosevelt was the first U.S. president to ride in a government-owned automobile (a White Steamer), but Congress did not pass legislation to eliminate the White House stables until 1951.

14

Willys Station Wagon Prototype

Designed and built by Ghia to replace the boxy Jeep station wagon, this prototype was never put into production. Willys' management said it would cost too much to meet competition.

16

FWD—The Workhorse of World War I

The Four Wheel Drive Auto Company, Clintonville, Wisconsin was rescued from near bankruptcy by World War I orders, and exists today as a builder of multi-wheel drive commercial vehicles.

17

The Road Runner of 1908

From the Newsletter of the Southern California Chapter, SAH, comes this story by Jim Valentine about the one and only Road Runner prototype, made in Los Angeles.

19

Book Reviews

Regular contributors Keith Marvin and Griffith Borgeson review a number of interesting books, any or all of which would be a valuable addition to your reference or research library.

22

Factory Photo—1922 Earl Sedan

Earl Motors, Inc., Jackson, Michigan, was organized by Clarence A. Earl, former Willys-Overland president, to succeed the Briscoe Motor Corporation, but even with its greatly improved appearance only about 2000 Earl cars were made. The company failed in 1924.

Further information about the Society of Automotive Historians, Inc., may be obtained by writing to the Society of Automotive Historians, Inc., c/o National Automotive History Collection, Detroit Public Library, 5201 Woodward Avenue, Detroit, Michigan 48202

Editorial Comment

The request for comments about the Dino article (AHR No. 17) brought several letters, which are published in this issue beginning on this page. This response was not unexpected, for readers have commented before on the lack of articles concerning sports cars, cars made in the last two or three decades, and cars made outside of the United States. Reams of material could be written about such automobiles, and there is room for a lot of it in the pages of the SAH publications—IF a few of our members who own such cars, or who are knowledgeable about them, would take the time to write them.

The same could be said about other types of automotive vehicles, both antique and modern. In these pages the trucks, the electric cars, the steam cars, the high-wheelers and the cyclecars have hardly been mentioned. Very little material has been contributed concerning racing and racing cars, both early and recent.

At the turn of the twentieth century, no one could be sure which form of motive power for road vehicles would become dominant. The steam engine had been around for well over a century, and for automotive use it offered smooth, reliable performance with unlimited cruising range so long as it was supplied with fuel and water, which were both readily available. But it required a great deal of attention to keep its boiler and other accessories in working order; daily start-up could take as much as 20 or 30 minutes; and the hazard of fire was ever-present.

The electric motor was already well known for its reliability and silence, and electrically powered cars could be depended upon to start easily in any weather, and to require very little in the way of maintenance other than recharging of batteries every 30 to 75 miles—a process requiring several hours. This, plus the high cost of periodic battery replacement, eventually doomed the electric car to extinction, although such cars were made for more than 30 years.

The internal-combustion engine, in the early days of the automobile, had one distinct advantage over its two competitors. Although none too reliable, it could usually be started easily by means of a hand-crank (which could, and frequently did, break the arm of the cranker), and, once running, gave the automobile unlimited range. By 1911, however, reliability had been greatly improved and the self-starter had been invented. The race was ending, and the gasoline car was to be the undisputed winner, not necessarily because of its advantages, but rather for its fewer disadvantages.

There are other auto-related subjects which could also provide interesting articles for the pages of the SAH publications. The great factories in which automobiles have been built and the companies that operated them would be good subject matter, and so would stories of the men who designed the cars and established the factories. An account of the development of our magnificent highway system, which, only a few decades ago, was a sea of mud in wet weather, and was shrouded in clouds of dust when dry.

Good accounts could be written about the development of a great many auto-related items, such as lamps, tires, fuel systems, heating systems and dashboard instruments.

Just about all of our members know about automotive subjects that the rest of us don't. Won't you share your knowledge and experience with the rest of us?



Letters from our readers

RESPONSE TO THE DINO ARTICLE (AHR No. 17)

From Ken Browning, P. O. Box 543, Tillsonburg, Ontario, Canada N4G 4J1:— A marvelous package, containing a copy of AHR No. 17, my photos and material for the Dino article, has been received. I must say the Dino piece was very professionally presented with just one glaring typo: the first sentence on page 6 should have read, "Whether by design or by chance, the wheel *does* complement the car." Oh, well —.

Your editorial expressed things well. While I find little of personal interest in the Society's publications, I *am* an automotive historian, if only on an amateur basis. My specialty just happens to be Lamborghini, which was founded in 1963. Until very recently the factory had no sense of history and, with the many turnovers in staff and management, early photographs, literature, etc., have simply vanished through neglect. I've located a lot of this early material myself and, if I don't have a particular item, I know who does.

I finally got a chance to make use of this hobby by writing the history of Lamborghini for *Automobile Quarterly*. It was very satisfying to piece it together over a period of several months and contact some of the people originally involved. It will be in Volume 23, Number 1 and, approaching 8,000 words, may be among the longest articles they've ever published. I really did it as much for the factory as for myself.

Anyway, I have no doubt that your courageous use of my Dino article will cause a bit of controversy, and I look forward to reading the letters. For one thing, I especially appreciated the well-written captions on the photos. I once had an article ruined by the editor's captions.

From Matthew C. Sonfield, 20 Hilltop Drive, Syosset, New York 11791:— I strongly agree with both ideas: (1) more recent automobiles (2) non-American cars. Automotive History should focus on all aspects of the subject.

From Michael Samuel Aurelius, 1435 Melbrook Drive, Munster, Indiana 46321:— As a recent member of the SAH, I received my first copy of *Automotive History Review* (Fall 1984). In it you invited members' opinions regarding the publication of articles discussing recently manufactured automobiles in general, and automobiles manufactured outside of the U.S.A. in particular. I, in short, approve.

As a thirty-one year old, I do not personally remember many automobiles made before the 1950's. Like many fellow automobile enthusiasts, however, I knew all the major makes by the age of five and could even identify the model years. After discussing that fact with many of my fellow enthusiasts, I have found that early knowledge and interest in automobiles is not uncommon. Perhaps automobile enthusiasts are born with an extra chromosome—in the shape of a 1930 Murphy-

bodied Model J Duesenberg Boattail Speedster. Car nuts are born, not made.

Getting back to the article about the 1967 Fiat Dino Coupe, I remember a similar attempt to introduce articles about recent automobiles in what is basically a publication dedicated to automotive history. In the fall of 1972 an article appeared in *Automobile Quarterly* entitled "A Critical Look at the 1973 American Cars," by Don Vorderman and Jan P. Norbye (an SAH member). There—horror of horrors— were 34 pages devoted to, describing, and picturing the full line-up of the 1973 American cars. As I recall, a ballot was included asking whether the readership approved or disapproved of including articles about the current automotive line-up. Readers were requested to vote for or against continuing such articles.

At the time I had mixed feelings. I could see the point of including discussions of current production cars, but, on the other hand, I felt that I could turn to such publications as *Motor Trend* for such information. Therefore, I never sent in my ballot. The response must have been negative, however, as AQ never included such an article again—at least not through 1980, when I stopped my subscription. Looking back, I now wish that AQ had continued to run the American car line-up each and every year thereafter, for, after the passage of 11 model years, I find it interesting to go back and see the Detroit offerings for 1973. So, while it may not have been appreciated in 1972, a detailed pictorial of the then current cars now seems desirable. With the passage of more years, the wisdom of the aforementioned article will become manifest. Imagine the research tool such an article could be to the historians of the future. Also, pause and think what a helpful tool such as an article picturing the 1920 American car line-up would be to today's automotive historian. As you stated in the Editorial Comment, "...more modern automotive doings should be given space in the SAH publications, and recent events—VERY recent events— should be recorded now. History is being created every day." You are absolutely right, for history is being created every day, all over the world, not just in America. So, articles about recent automobiles and automobiles not manufactured in America should be included. After all, today's events are tomorrow's history.

From Steve Richmond, 445 Walnut Ave., Arcadia, California, 91066:— I would like to respond to your request for comments regarding the future publication of material of a foreign nature, and what criteria should be used in determining what is presented in our SAH newsletter and *Review*.

First of all, I think foreign makes and models should be presented on occasion, as many SAH members have interests that include cars built outside of the United States. I am personally interested in domestic makes from 1893 to 1960. I can, however, understand that every person interested in automotive history might have different areas of concern. I think the real question that we must resolve is whether to include recently built automobiles in our publications. What does the term "automotive history" mean when applied to the SAH? It is my personal opinion that a given make and model of automobile should be at least 20 years old before it can be considered as subject matter for the SAH. I don't think we should worry too much about history being lost on makes and models more recent than that. Reams of material are available on the automobiles of the late 60's and after. I would like to see equal time devoted to each decade up and through the

early 60's. Each was special in its own way from the 1890's when the automobile was in its experimental stages to the 50's and early 60's when styling was fascinating even if sometimes bizarre. I will be interested in reading the views of others on this subject.

From Elliott Kahn, P. O. Box 869, Clearwater, Florida 33517:

Long time coming—and I am glad to see it— articles on something other than ancient, and acknowledgement that recent events need coverage too. I hope there shall be much of this in future SAH publications. Also note item in *Journal* about mis-information (or ambiguous) given in so many encyclopedias and lists of makes, long overdue to also be pointed out to the membership.

Now, can we acknowledge that our subject is "automotive," and not just passenger cars, and do some coverage of other facets of our subject?

I will also say that a pleasant surprise to me is two issues of the *Review*, with good articles in both, as well as much good in the *Journal* as well, and even mostly correct. For that I congratulate you on your work. I am, though, still trying to figure out how Harlan Appelquist had more Stutz cars out on the road by the end of 1920 than they reported vehicles made total, along with so many fewer of so many other brands, who reported far more built.

Editor's Note: The following letter was written in July, 1984, well before the publication of Automotive History Review No. 17 with the Dino article and my request for opinions about the inclusion of more recent automotive history, but it seems to fit well with this group of replies.

From Ross MacLean, 601 Newton, San Fernando, California 91340-2106:— Although I never have been exactly sure what sort of material is considered suitable for publication in the S.A.H. publications, I do notice that the preponderance of it is in an era somewhat earlier than my special field of interest. Whether this is because the events of a mere fifty years ago are not of as much historical significance and interest as those of seventy-five or a hundred—or simply because the students of the earlier era are more numerous and prolific—I cannot judge.

In any case, I am enclosing a couple of recent editions of my column *Journey Through Airflowland* for your consideration. The column has run intermittently since 1969, and as the title suggests, has concerned itself exclusively with matters relative to the Chrysler and DeSoto Airflow automobiles of 1934 to 1937.

The publication *The Airflow Newsletter* is not copyrighted, and as the author I grant permission on behalf of both myself and the editor, Jim Lightfoot, to reproduce this material if you wish to. Naturally, we will request that appropriate credits be given to both author and publication, a request that I'm sure would be fulfilled without even asking.

Regrettably enough, the Airflow world is very small, the club having at present slightly over 200 members. The extreme scarcity of restorable cars and the necessary parts having served to inhibit growth severely, interest in the breed has been very slow in developing. I'm happy to note that in the last few years, however, awareness has been increasing rapidly, and perhaps some of your readers would be receptive to a little Airflow material.

The Cover Story...

A Very Special 1931 duPont

The following brief article was written in 1963 by the late Dr. B. L. Mundhenk, of Lima, Ohio, and updated in 1984 by Mr. Richard E. Riegel, the present owner of the car. Although it has not been published previously, so far as we have been able to determine, the original manuscript includes the words, "Article and pictures courtesy of the Classic Car Club of America." The photos were made by Dr. Mundhenk, who was an excellent amateur photographer.

In its day the car pictured here was one of the most celebrated in the midwest. It is a double-cowled duPont, a one-of-a-kind car, the only phaeton the company ever made. It was the second duPont to be built in 1931, and was designated as a Model H. DuPont built on two different chassis; one was for sedans and town cars, and the other was for the more sporting cars. In the latter, the motor was shifted six inches to the rear for better handling and weight distribution.

This particular car was originally purchased by a Mr. Cummins Catherwood at the New York Auto Show of 1931. It had a custom-built body designed and framed by duPont with metal work done by John Marshall for Waterhouse. (Some have credited the body to Merrimac.)

The car weighed in at slightly more than 5000 pounds. It was powered by a straight-eight Continental engine with a bore and stroke of 3.38 by 4.5 inches, giving a displacement of 322 cubic inches. With a compression ratio of 6:1 it developed 140 BHP at 3800 RPM, but could be pushed briefly to 4100 RPM, which makes the top speed a theoretical 88 MPH. At normal speeds the gas mileage was a comparatively modest nine miles per gallon.

The wheelbase was 146½ inches, and the original tire size was 19 x 6.50. The motor was connected to a Warner four-speed transmission and the final drive ratio was 4.67:1. The speedometer registered to 120 MPH which seems a bit optimistic considering the weight to horsepower ratio.

The car was rushed to completion for the 1931 New York Auto Show, with several interesting results. It was equipped with a tachometer, but no provision was made for it to ever be connected. This created a problem for its owner when first shown in the Grand Classic of the Classic Car Club. If the tach was not operating, points must be deducted in one category. Yet, because this was the way the car was originally made, if the tach did operate, points must be deducted in the authenticity category.

Another complication was a non-functioning gas gauge. A later owner, Russell Strauch, of Toledo, Ohio, and his mechanic, had to cut a hole in the body, improvise a three-way set-up, and spend 50 hours to correct the oversight.

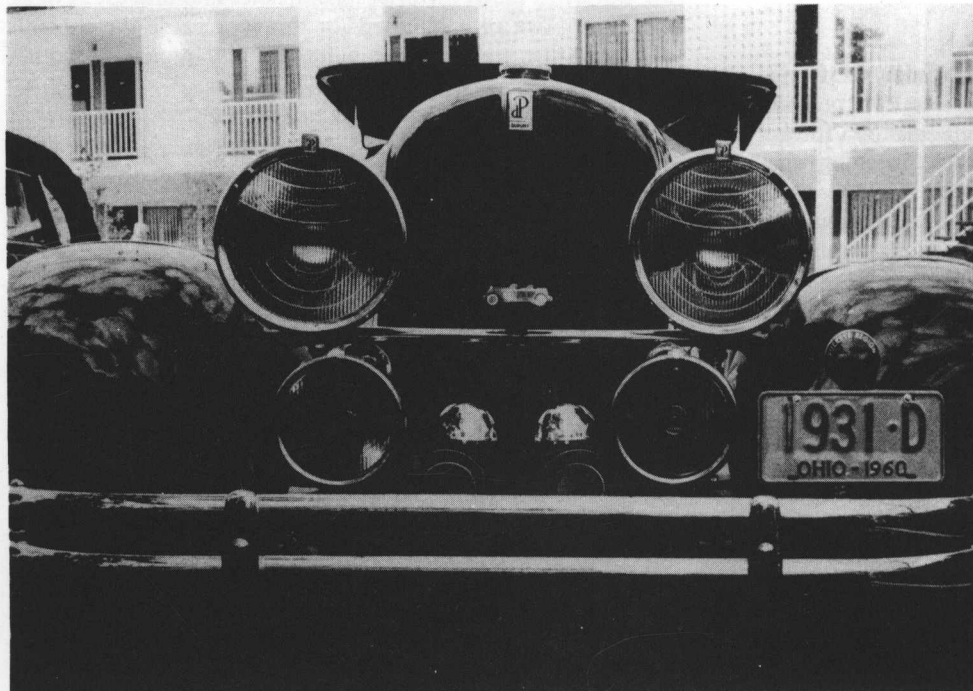
This duPont, although provided with a top, had never been equipped with side-curtains, which again made for some head-scratching among the judges. Side-curtains must be displayed during the judging—yet the car never had them.

Both the tach and side-curtain problems were solved by Mr. Strauch, with considerable expense and difficulties. In order to technically comply with the rules that equipment must work on a classic car, he improvised an attachment for the tachometer, and also had side-curtains fabricated (but never used) to abide by the show rules.

When shown at the New York Show, this car was upholstered in black patent leather. This was later replaced with a more conventional tan leather. Although not as spectacular as the patent leather the car had originally sported, the tan leather must have been much less of a headache to maintain.

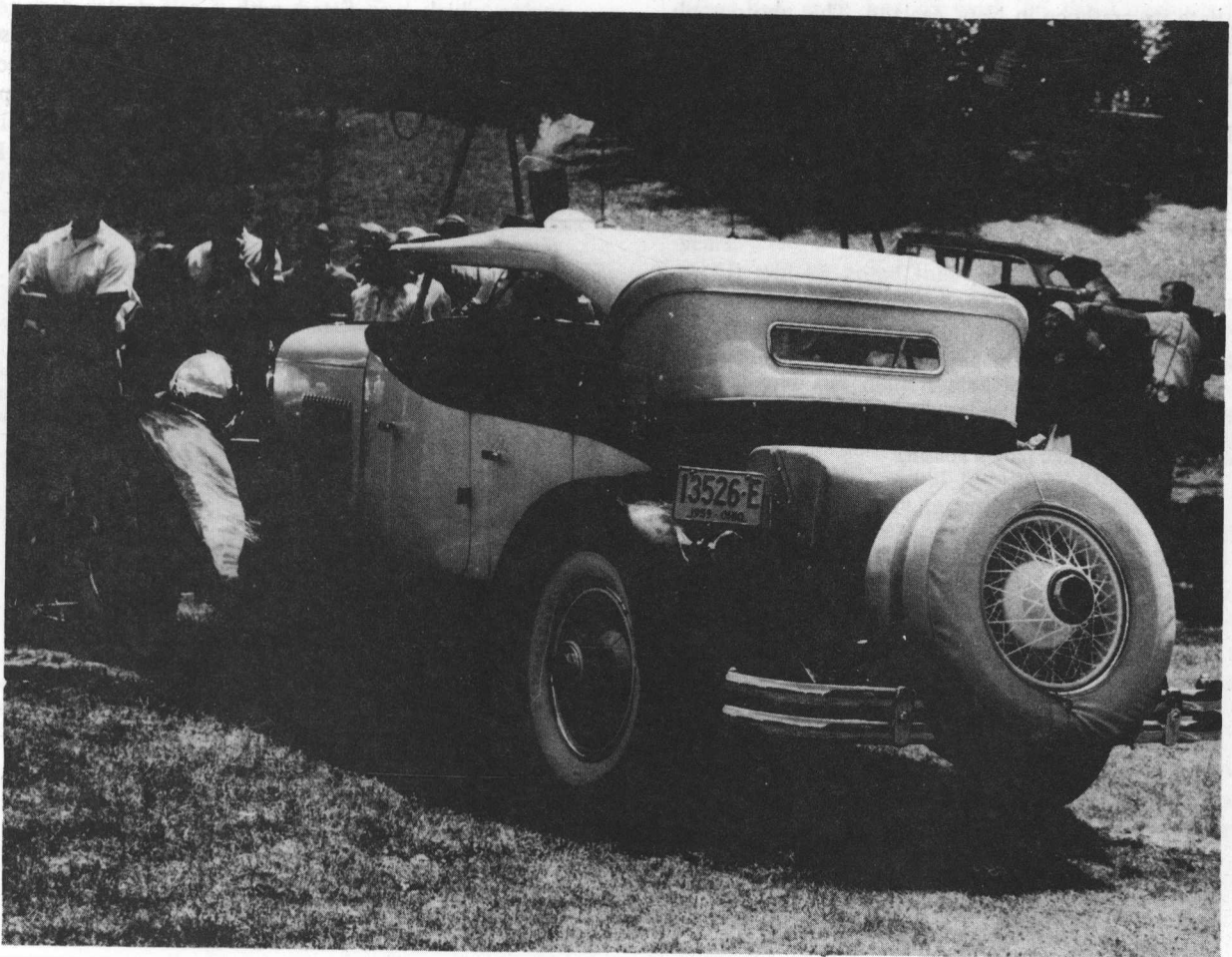
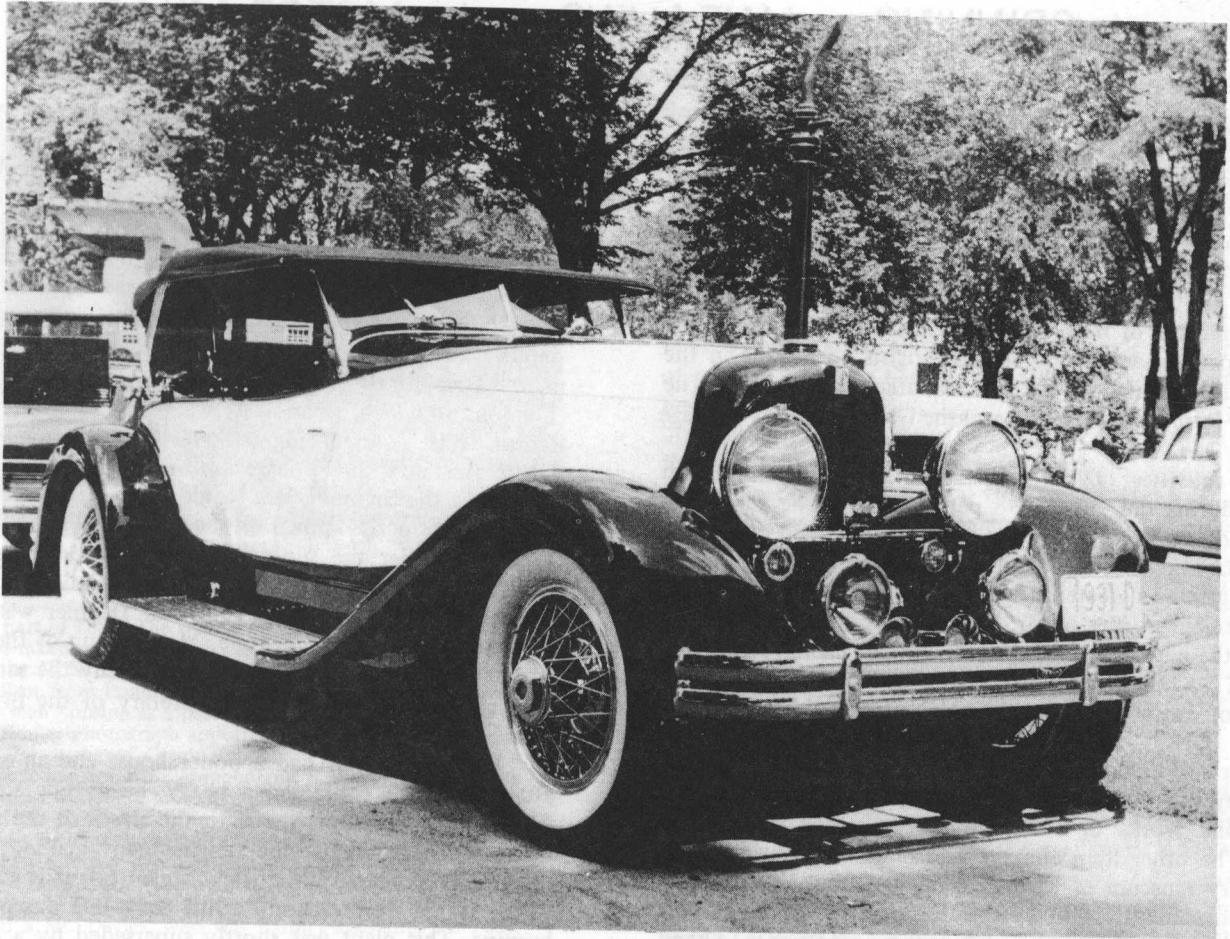
In its first showing, this duPont achieved the highest score ever attained by any car in its initial effort. It amassed an amazing 99 points out of a theoretically perfect 100.

After having been shown at three Grand Classics, it was retired from competition by Mr. Strauch. In 1963 it was sold (through an ad in the New York Times) to SAH member Richard Riegel, Jr., of Montchannin, Delaware, who still owns it.



After the first draft of this article was set up, a copy was sent to Mr. Riegel for his approval and for any corrections which might be necessary. These corrections have been incorporated into the story as presented here. Mr. Riegel also comments:

"The car is a great delight to me and has been enjoyed at various shows. It went to Dusseldorf, Germany, for the show there in 1979 and won the grand prize. It ran in the FIVA Rally in 1983 and was second in its class, and won the VMCCA Award of Excellence in the concours at the rally. Not bad for a 20-year-old restoration."



SPINNING and WEAVING at the MOTOR MILLS

BY MAX GREGORY

The English city of Coventry, far famed as the home of Lady Godiva in earlier times, was also the home of early motor manufacturing in that country. The Motor Mills, so named because the buildings had been erected for use as a cotton mill, which venture proved a failure. After being gutted by fire, reinstated by the insurance settlement only to remain unused for a length of time, this facility was availed of by the British Motor Syndicate of H. J. Lawson, which aimed to corner the relevant patents and manufacturing rights to motors in the then British Empire for its two manufacturing entities, The Daimler Motor Company Ltd, and the Great Horseless Carriage Company Ltd.

The activities of the GHCC and its relationship with Daimler during the 1896-1898 period seem to be somewhat vague, and two unrelated but relevant items, which have come to the attention of this writer in recent times, might prove useful in gaining a greater insight to the subject. One such item was the reminiscences of Mr. William McNeil which was published in the journal *The Motor in Australia* in serial form from late 1921 to the beginning of 1922, in which he reviewed a century of automobile progress. McNeil gained employment with the GHCC very early in 1897, and transferred to Daimler a year later. In 1911 he migrated to Australia, settled in Sydney, and was operating a firm called the Reliance Automobile Works in Mountain Street at the time of his review. The other item consists of a photograph held by the Canterbury Museum of New Zealand depicting a rather agricultural machine, thought by the Museum to be of the earliest motor vehicle in Christchurch, although no evidence is to hand to substantiate its presence in New Zealand. This photograph was used to illustrate an article, written by Mrs. Leith Newell, on pioneer motoring in that country which appeared in *Beaded Wheels*, the journal of the Vintage Car Club of New Zealand, during 1984.

The degree of ambiguity about the relationship between the GHCC and Daimler, and about the very early vehicles

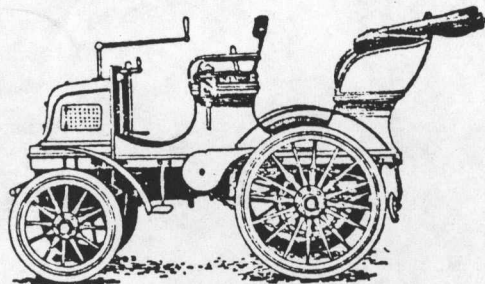
of Daimler, can be gauged by the appearance of two illustrations, depicting different machines, of the "first" English Daimler of 1896 in Anthony C. Bird's book, *The Motor Car, 1765-1914* (Batsford 1960). This apparent indecision is commented upon in the text of that book, and its clarification will, hopefully, be assisted by the testimony of one who was present at the Motor Mills during the period in question.

William McNeil's first contact with the infant motor industry occurred early in 1897 when he attended a meeting of the Great Horseless Carriage Company at Holburn Viaduct, London, on which occasion he was appointed to a post at the Motor Mills, commencing immediately. There he found the GHCC installed in a large four-story building, previously known as the Spinning Mill, while Daimler occupied the out-buildings formerly known as the Weaving Sheds. The GHCC was then under the supervision of the works manager, Mr. Charles Crowden, his equivalent at Daimler being Mr. J. Critchley. The company secretary of Daimler was identified as being Mr. E. M. C. Instone. Membership of the boards of directors of both concerns were practically the same, Charles Jarrott being indicated as the secretary of the British Motor Syndicate.

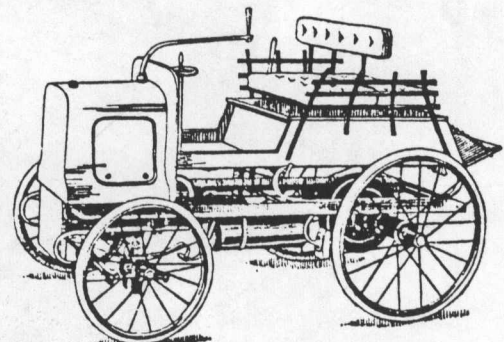
The Motor Mills had a boiler house and an engine-room attached which contained a heavy, beam-type steam engine which was quite superfluous to the needs of the automobile manufacturing plant, the engine-men making humorous remarks about it requiring only steam to get it started, after which it ran "on vacuum" with only one dampered boiler burning. This plant was shortly superseded by a Tangye gas engine which was fitted with a self-starter designed by Mr. Fred Lanchester. The GHCC itself was making use of only the third floor and the power house building, the second floor being used exclusively by Mr. Pennington for the purpose of carrying out experiments with his car, McNeil being of the understanding that the GHCC was defraying his costs. The ground floor was occupied by the Humber Cycle Com-

From *THE MOTOR CAR, 1765-1914*, by Anthony Bird (Batsford, 1960)

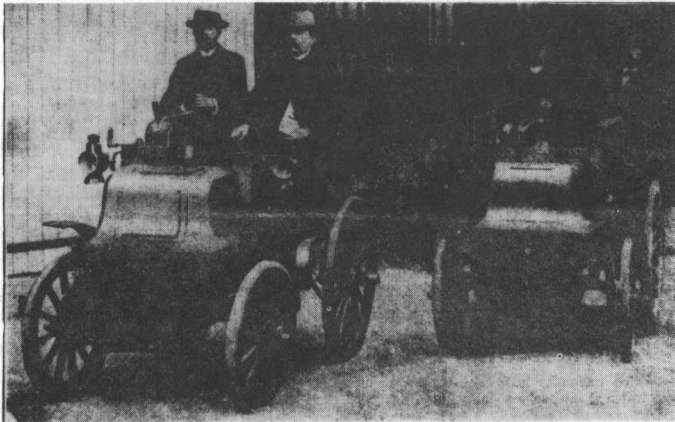
A curious side issue to the early history of the Coventry Daimler is provided by the illustrations shown in (37) and (38). Both of these cars are described as the first English-built Daimler car, 1896, in numerous books and articles. Fig. 37 undeniably shows a vehicle of the type ultimately produced (though it is doubtful if any cars were made in Coventry before the end of 1897). The crude affair pictured in (38) can only, one hopes, be a figment of some peculiarly disordered imagination but it must, presumably, represent some design on which the company was once prepared to embark. Though obviously of the utmost horror mechanically, it is of interest because of the (unsprung) live rear axle with its enormous crown-wheel and pinion housing.



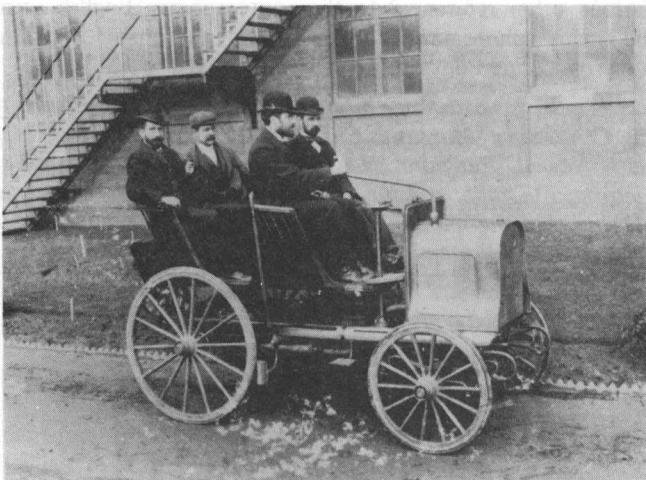
37 The "First" English Daimler Car of 1896 is the title usually given to this picture and is also applied to the car shown in fig. 38.



38 Also the "First" English Daimler car of 1896



The illustration from the McNeil account showing the first two cars completed by the Great Horseless Carriage Company in the latter part of 1897. The vehicle on the left was the first made, and it was taken on the London - Richmond run in November of that year by McNeil. This run was the anniversary of the Emancipation Run from London to Brighton held the previous year. McNeil is seen "posing as a passenger" in the second car (right). Another similar photograph appeared in the magazine *The Vintage and Thoroughbred Car* of February 1955, credited to John Pollit, which has not been cropped and shows on the right the flight of steps which are most likely the same as those visible on the left of the Canterbury print. Seven persons are shown in the Pollit photo, aboard the same cars which are aligned exactly as shown and obviously taken at the same photographic session. This allows these figures to be identified as being F. E. Baron at the tiller of the first car, J. H. Barrows, and at the tiller of the second car a Mr. Davies, who was Baron's assistant. The Pollit photo credits Baron with being the works manager of the GHCC, indicating a change of incumbency during the year. McNeil's position was given there as being that of wages clerk.



A photograph held by the Canterbury Museum, New Zealand, of an unknown motor vehicle. Due to the number of similarities to the machine stated to have been the first made by the English Daimler concern in 1896, it is suggested that it is either the second example, or the first with a different body and wheels. It is further suggested that the location was at the Motor Mills, as a comparison with the photo of the two machines of the GHCC reveals the same garden layout, shrubs, and building façade.

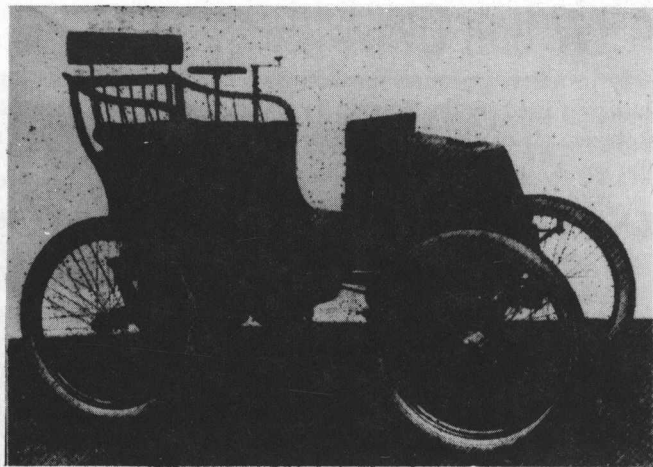
pany to relieve pressures on their own facilities, while the top floor was used by the Beeston Tyre Company. Within months, however, all of the tenants had to depart, Mr. Pennington's "fat spark" having shown no signs of commercial success.

With regard to the organization within the GHCC, McNeil was not greatly impressed. He recalled that "... the collection of machinery that I found in position, and which continued to arrive for some time, defied description. It was the most mixed and weird assembly imaginable; and the same remark applied to the stock of materials on hand, many of which seemed to have no reference to the articles about to be produced. Progress in the construction of cars was anything but advanced, and a single one had yet to be put on the road. Remarkable to relate, although the company held an expensive license to make Daimler and Panhard mechanisms, they were purchasing the complete engines from their neighbor and experimenting with a belt-driven type of transmission from a design that seemed to be 'half-baked' and subject to daily alteration. It was only after enormous loss that instructions were received to discontinue the belt-driven experiments and concentrate on Panhard-approved lines. This change resulted in the two cars shown being produced within a few weeks, followed by a regular output of similar salable cars."

Out in the Weaving Sheds, under Critchley's direction, matters were proceeding in a manner which McNeil found more acceptable. He recounted that "The Daimler Works 'next door' bore a different aspect, the machinery being well selected and the whole establishment having the appearance of organization and business purpose. Experiments on different forms of transmission had taken place there also, but the company had early got to work on the Daimler and Panhard mechanisms, with the result that they were always ahead of their neighbor. In their works manager, Mr. J. S. Critchley, the Daimler company had an able and enthusiastic organizer whose ability and general worth I soon recognized when he became my chief the following year, on my transfer to the Daimler as works superintendent."

McNeil remained in that position for more than two years.

It will be noted that the emphasis at Daimler was with the mastering of the mechanicals, their engines being used by the GHCC as an example, and the reference to experiments with different forms of transmission having taken place there ties in very well with the bevel-gear drive and live rear axle system so clearly seen in the drawing of the 1896 Daimler and discernible in the Canterbury Museum photograph. Perhaps this transmission layout prompted the use of an unsprung rear axle to avoid the necessity of drive-line joints. The springing between the body and chassis of both examples appears to be the same. A description of the first Daimler was apparently given in the *Autocar* magazine in late 1896, according to the *Autocar* of November 5, 1921. It fits the vehicle depicted in the drawing and seems only to vary from the machine in the Canterbury Museum photograph in that the first had dos-a-dos seating in a natural wood dog-cart body with skeleton sides and wire wheels, whereas the second, with four unknown passengers, is a phaeton style with spindle-backed seats. Both appear to answer to the general description with an armored ash frame, a rigidly mounted rear axle, and a front



The Daimler light car with a 3½ hp 2-cylinder engine and belt drive, of which two examples were built and hopes of production entertained toward the end of 1898. Apart from trials and testing "they never saw the light of day" and McNeil thought it likely that an illustration had not previously appeared in print. The original engine of 4½ hp had, by this time, been developed to yield about 7 hp in the regular line, and the 12 hp four was in the offing, so the call for a "handy light car for the man of moderate means" was given consideration at that time.

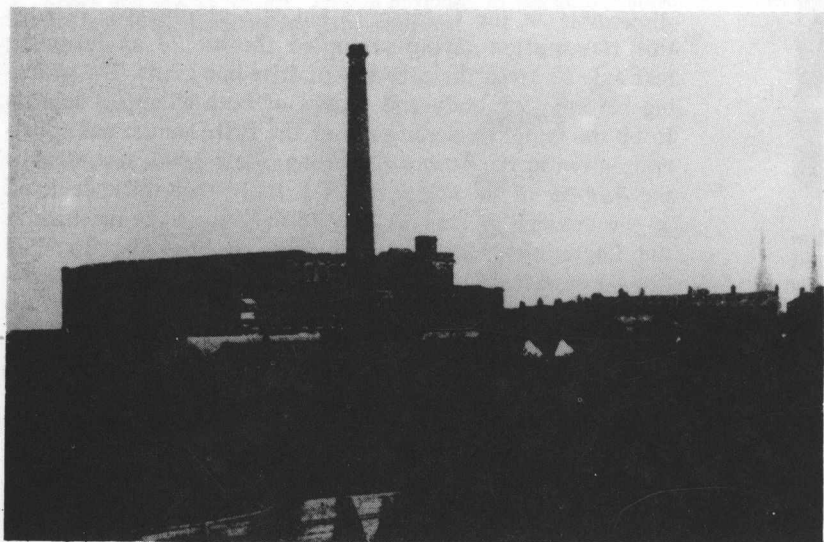
axle secured by half-elliptic springs which had long top leaves with the ends bent into a scroll-like form. The engine was at the front under a sheet-metal bonnet from which protruded a long curved tiller having a short vertical hand grip. Other points indicated are the body hung on long C-springs, solid tires and spoon brakes.

The production machines, as offered for sale, would appear to have embraced some features of both the Daimler and the GHCC vehicles in that the engines are known to have been Daimler in all cases, the origin of the steering tiller can be seen on the 1896 Daimler while the general layout, style, and the final chain drive, for example, appear to have their beginnings with the GHCC machine. The suggestion which has been made that, in production, the vehicles were the work of Daimler (engines and mechanicals) and the GHCC (bodywork and wheels) acting co-operatively could, in the light of known information, be regarded as highly likely. Just how long such a conjunction would have remained in force can but be a matter for speculation, as McNeil makes reference to a new chassis erecting shop for Daimler being built in 1898 in which year, also, many changes were made to the management, program, and title of the GHCC.

The suggestion has been made, too, that most vehicles were imported from Germany during the first two years of British Daimler's operation, although McNeil makes no mention of them. He did, however, refer to an 1896 German Daimler, and recounted his experience in trying to handle it in the following way: "The Daimler had a two-cylinder engine similar to that of the Panhard, with the exception that it had belt pulleys as well as a flywheel. The engine was situated at the back of the car and covered by a metallic shield very much like a reversed bath-chair in appearance. The final drive was by spur pinions into internal toothed gears on the rear wheels, the intermediate transmission being by belts, pulleys, and counter-shafts. I found one of these stored at the GHCC works on my arrival there. Only once did I attempt to drive it, under the guidance of an expert from the maker's staff. The attempt was successful, and we got it around the works a few times, but the manipulation was 'fearful and wonderful.' I have driven traction engines with greater ease and comfort. It was the most ugly and ungainly of all cars, and the fact that its makers immediately afterwards abandoned it in favor of the accepted Panhard design proved its inferiority." A further comment on this machine runs: "Then I tried the old German Daimler with belt drive, as previously explained, and have often thought since how fortunate it was for me that my first driving was not on this vehicle, otherwise my enthusiasm might have been subdued at the outset."

Two imported types he mentions unpacking were the Leon Bollee and the DeDion-Bouton tricycles, and his reminiscences included his experiences at the controls of these and other vehicles of that period, such as Benz, Hurtu, and the 1895 Panhard-Levassor 4½ horsepower 2-cylinder car, called the "Yellow Panhard" which had won the Paris to Bordeaux race in June of that year and which was, during this period, owned by the Great Horseless Carriage Company. The overheating tendencies of the Pennington machine, its supposed trip to London at "lightning speed" and the evasiveness of this run by Pennington, his manager, Mr. Graham, and the actual driver who later worked under McNeil were recalled. Various other references to the contemporary English scene and many photographs of prominent personalities of the industry rounded out the McNeil account.

Thanks for assistance in preparing this review is offered to the Canterbury Museum, Christchurch, New Zealand; Mrs. Leith Newell, Rangiora, New Zealand; The Sate Library of Victoria, Australia; and Mr. Michael Worthington-Williams for advising that the material in the McNeil account would be of value to the SAH membership.



A view of the Motor Mills in 1897. Set well back from the road to Bedworth, it could be approached only by crossing a narrow "hog-back" bridge, with a 1-in-6 gradient, over a canal which bounded two sides of the property. The other sides were hemmed in by old-established houses with fine, large gardens through which passed a railway shunting line. As the motors of the day could manage the grade only by rushing it, arrangements were soon made for a right-of-way through the railway depot yard. To the right are visible two of the three spires of Coventry Cathedral, a prominent landmark until the bombing raids of WWII and inspiration for the trademark of the Hillman car.

IDENTIFICATION REQUESTED (1974)andIDENTIFICATION RECEIVED (1984)

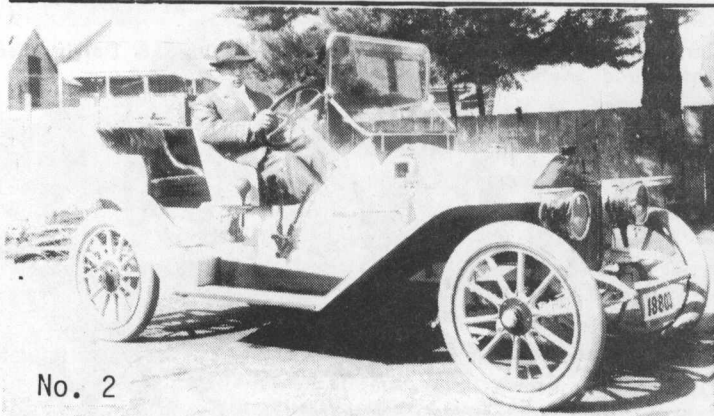
All things come round to him who will but wait.—LONGFELLOW: *Tales of a Wayside Inn, The Student's Tale* [1862]

Early in the summer of 1974, member G. N. Georgano—at that time connected with the National Motor Museum at Beaulieu, Hampshire, England—sent a package of photographs along with a letter which said, in part, “I am enclosing eight photographs of U. S. cars which we have not been able to identify, and wonder if you would be interested in running them in *Automotive History Review*.”

The pictures were published in AHR No. 2 (Summer, 1974) . By the time AHR No. 3 was printed (Spring, 1975) a number of letters concerning these cars had been received, but only three of the cars pictured had been identified, and two of those were different pictures of the same make (but

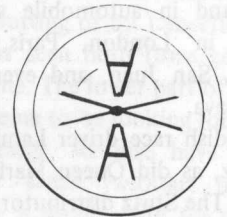
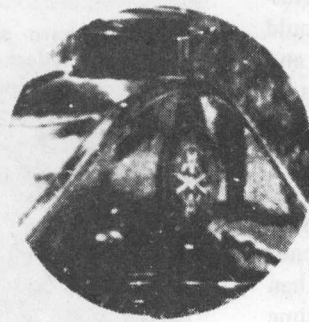
not the same car).

Shown here, as reprinted from our single existing copy of AHR No. 2, is picture number 2, along with my comments as editor. I must have spent hours searching my files of car pictures, nameplate reproductions, and odds and ends of clippings in search of a car with this unusual but distinctive radiator emblem and a six-spoked steering wheel, trying to find an American car that resembled the one in the photo. I wrote to emblem experts around the country, including the late Harry Pulfer, but none of them had ever seen this unusual nameplate. Now it turns out that I was looking on the wrong side of the Atlantic, for this is not at U.S. make after all. The rest of the story is printed below the pictures.



No. 2

is not too clear, so a sketch of what the nameplate seems to look like is included. Also, the space between the outer circles is filled with small lettering.



Can any of our emblem experts tell us what this one is? The enlarged detail is not too clear, so a sketch of what the nameplate seems to look like is included. Also, the space between the outer circles is filled with small lettering.

The original request for identification, reprinted as it appeared in *Automotive History Review*, issue number 2 (Summer 1974)

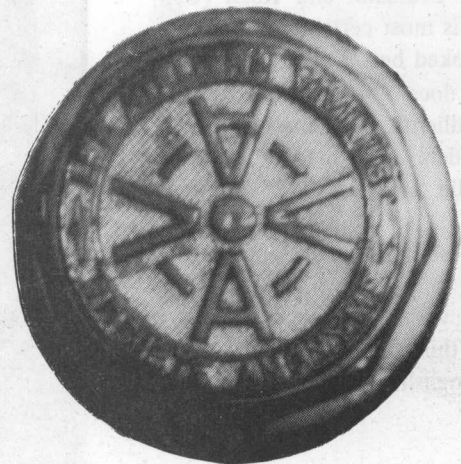
At the annual SAH Banquet in Harrisburg, Pennsylvania, on October 12, 1984, my wife and I had the good fortune to be seated at the same table with Bruce Ledingham, of Delta, British Columbia, Canada. Bruce is a long-time collector of automotive items including hubcaps and radiator emblems. During the course of the evening we discussed some of the many facets of automotive history, and I mentioned the photos that Nick Georgano had sent to AHR so many years ago. I drew a free-hand sketch of the emblem of car No. 2 as I remembered it, and Bruce said he'd see if he had any information about it. Now I have his letter of October 25, 1984, with the following information:

“You made a sketch of a hubcap and asked if I could identify it. At the time the only cap I could think of was a Belgian hubcap but I couldn't remember the name. It is a VIVINUS, 1899 to 1912, manufactured in Brussels by Ateliers Vivinus SA. Page 588 of Nick Georgano's *Encyclopedia of Motor Cars* has a descriptive paragraph. I would compliment you on remembering the detail of the hubcap in your sketch. The hubcap is cast brass, weighs about ½ lb., about 3" in diameter. I picked it up at Hershey 2 or 3 years ago. I have never seen another. The wording around the face is 'LES ATELIERS VIVINUS - SOCIETE ANONYME.' Enclosed is a polaroid.”

The car in the picture has a temporary cardboard California license tag, such as used by dealers and garages. Six of the eight pictures which Georgano sent were taken in the same place, presumably somewhere in California.

The Vivinus was certainly a rarity in this country—so much so that it is not beyond the bounds of possibility that Bruce Ledingham's hubcap may have come from this very car.

Richard B. Brigham



The Vivinus hubcap, which carries the same design as the nameplate

STUTZ...

WITH FOREIGN BODIES

by James F. Petrik

Although the Stutz never broke any sales records in the United States, the cars somehow managed to find homes all over the world.

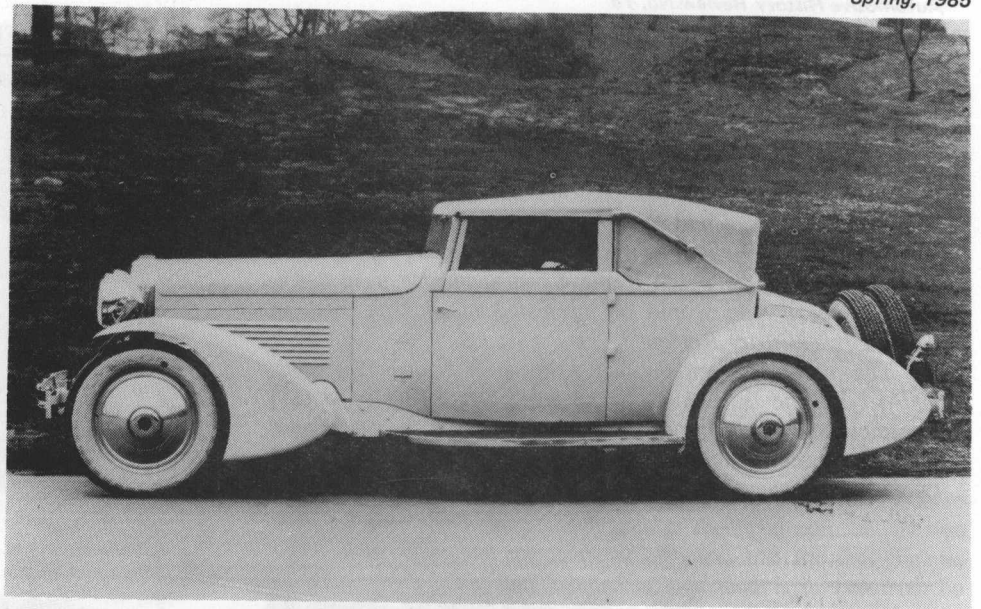
Stutz could be found in places like England, France, Germany, Holland, Norway, Sweden, Belgium, Mexico, Portugal, Switzerland, Hawaii, Australia, and South Africa. They could be found in automobile shows and salons in London, Paris, Brussels, Prague, San Juan, and even in Surabaya, Java.

Swedish race driver Lamley owned a Stutz, as did Queen Marie of Roumania. The Stutz distributor in Buenos Aires, Argentina, was none other than Luis Angel Firpo, known to old-time boxing fans as the fighter who knocked Jack Dempsey out of the ring.

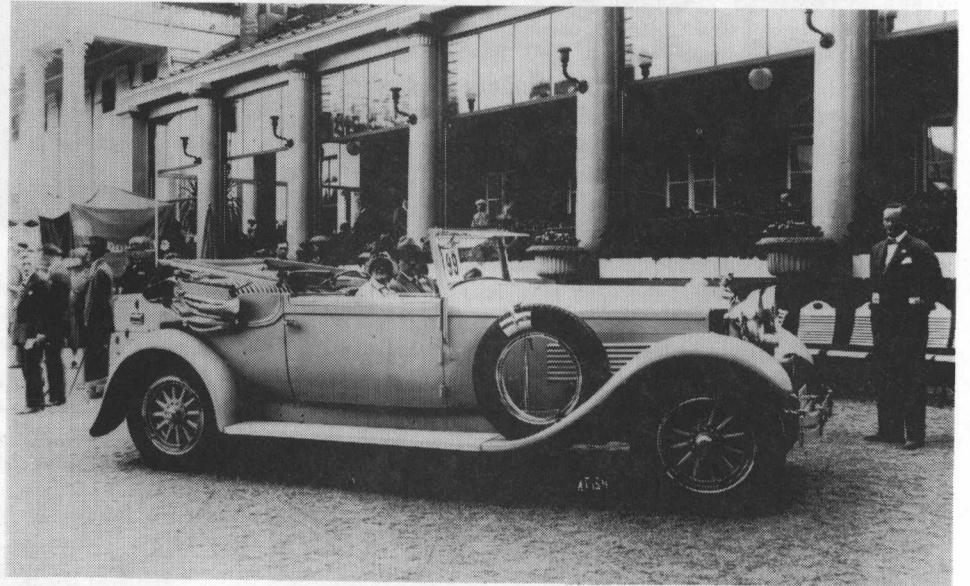
Our first car is a 1929 convertible victoria on the 134½ inch chassis. It was built by Hibbard and Darrin (Paris), spent its entire life in this country, and was originally owned by Andrew Mellon, as the story goes. The original color was called "Oyster Gray." A few years ago it was completely restored and, in the writer's opinion, looks better now than it did when new.

Another convertible victoria is our next subject. This time we have a 1928 model by Erdmann and Rossi (Germany). It is most certainly hoped that the car looked better with the top up. This car does not have the regular Stutz headlights. As a matter of fact, most models of American cars in Europe did not use the American headlights.

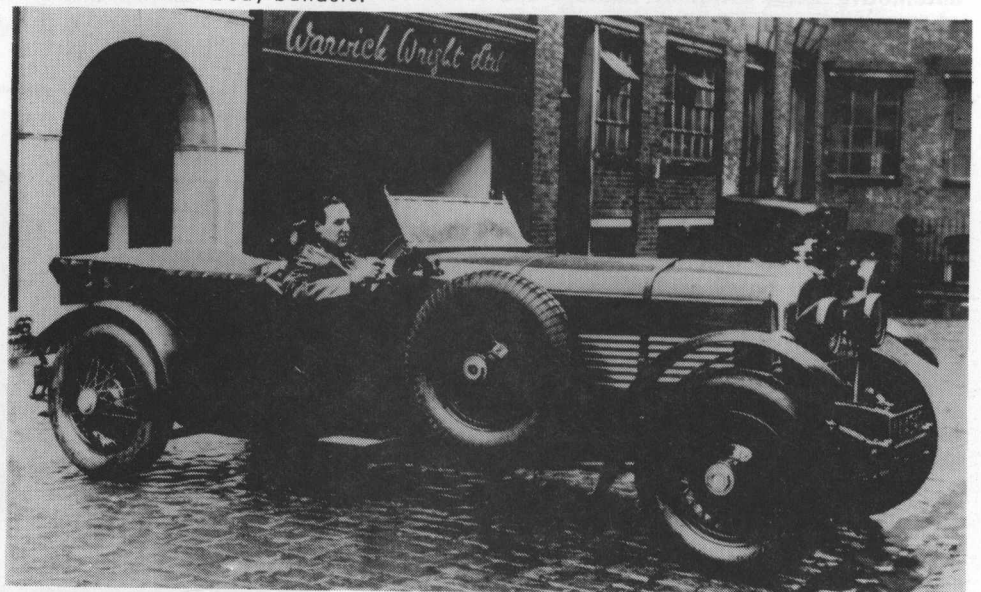
For those hardy souls who like the wind and rain in their hair, this 1928 speedster with English coachwork is just the thing. Warwick Wright Ltd. was the English distributor for Stutz.



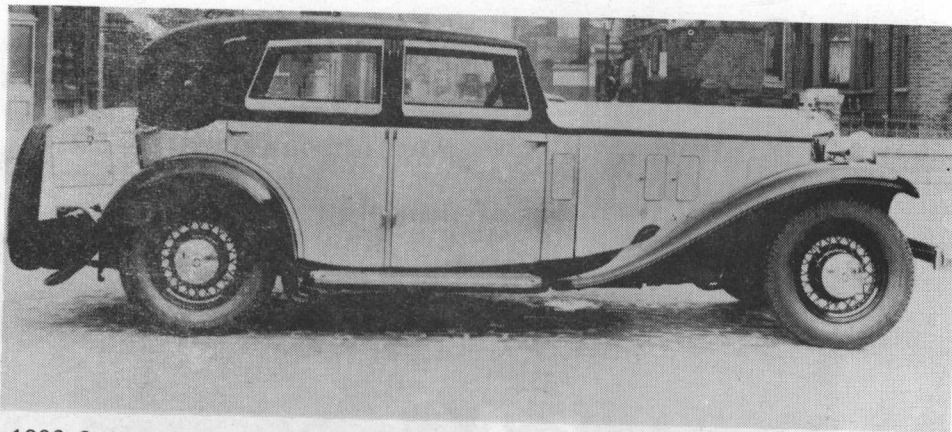
1929 Hibbard & Darrin Convertible Victoria. At that time Hibbard & Darrin used pontoon fenders on other body styles also—even a town car.



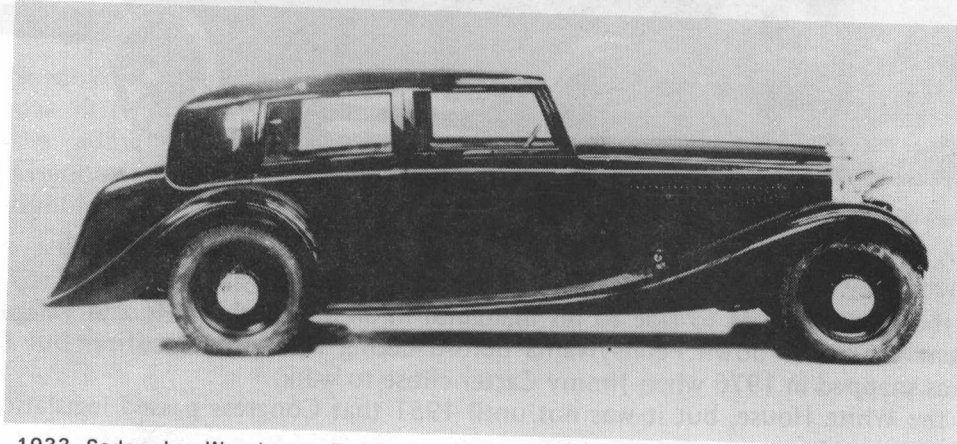
1928 Erdmann & Rossi Convertible Victoria. Styling was a little heavy-handed, a trait of most German body-builders.



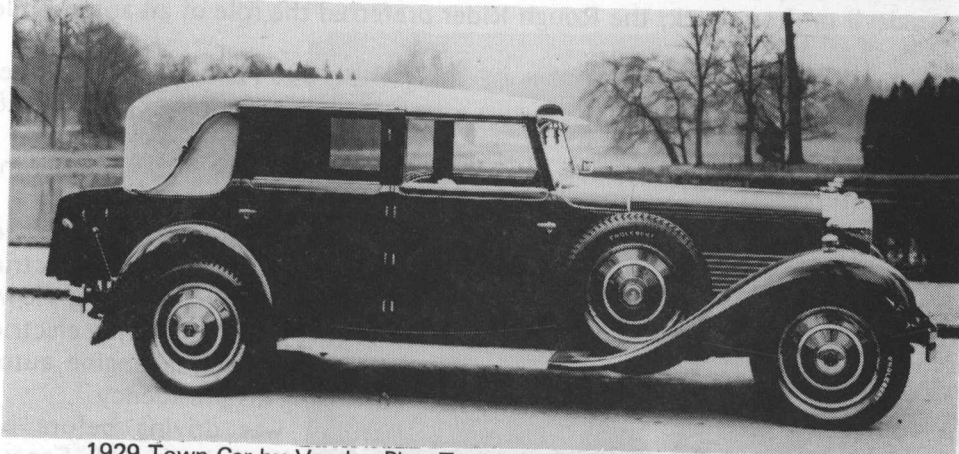
1928 English Speedster. Real disregard for weather, when it came to sporting machinery, seemed an English tradition.



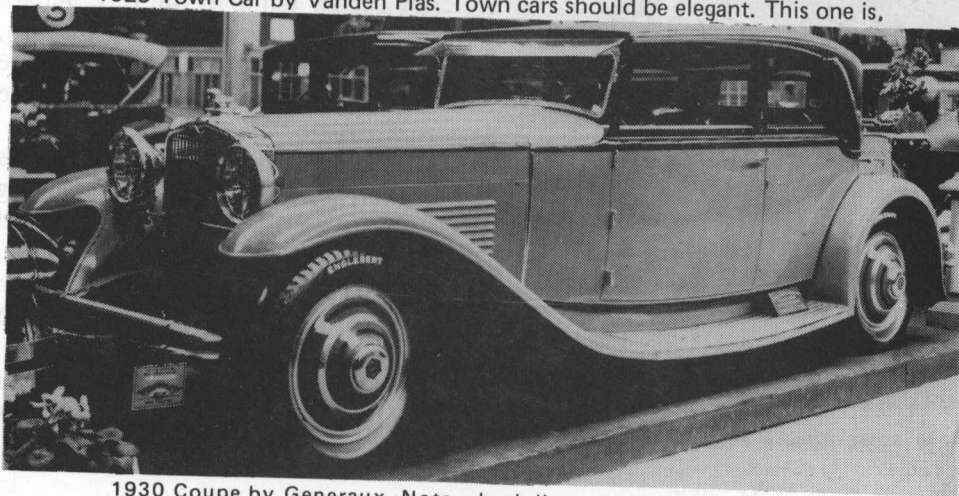
1933 Sedan by Gurney-Nutting. The drop-center rim was a new 1933 feature, doing away with the locking ring on each wheel.



1933 Sedan by Wendover. Extremely modern fender lines make this a stylish car. Whitewall tires and bumpers are sorely needed.



1929 Town Car by Vanden Plas. Town cars should be elegant. This one is.



1930 Coupe by Generaux. Note wheel discs and special front bumper.

While we are in England, let's look at two more cars. The first one is a 1933 four-door sedan on the 134½ inch chassis. This car was either by Gurney-Nutting or by Lancefield. The writer has seen both firms get credit for this one. The lower part of the rear fender seems to be looking for a lot of stone damage. We also have another four-door sedan, without bumpers. Wendover is given credit for this one. Note that the English are not all that sold on whitewall tires or bumpers.

Now we come to a pair of beauties from Belgium. Our first car is a lovely town car by Vanden Plas, a 1929 model on the 145-inch chassis. The top over the driver's compartment blends in very well, making it scarcely noticeable. The second car is a 1930 model, and the photo was taken at the Brussels Automobile Salon in early 1930. This was a two-door sedan by Generaux and was known as a "faux cabriolet." The car was finished in Sand Gray with black mouldings. Note the sweep of the sill, fender, and running board.

So ends the saga of the foreign Stutz.

Photo reprint permission courtesy of George A. Moffit.

Some American Presidential Automobiles

Four score and six years ago the White House met the automobile.

Just as the century was turning, William McKinley became the first President of the United States to take a car ride. It was in a Stanley steam carriage. Unfortunately, he also was the first chief executive to travel in an ambulance automobile, after he was shot in Buffalo, New York, at the Pan American Exposition in 1901.

The records of the Patent Library of the Motor Vehicle Manufacturers Association (MVMA) in Detroit indicate that McKinley took a lukewarm view of the automobile—and he was strictly a passenger. His successor, Theodore Roosevelt, was the first to get behind the wheel.



President William Howard Taft (far right) riding a Studebaker in 1908.

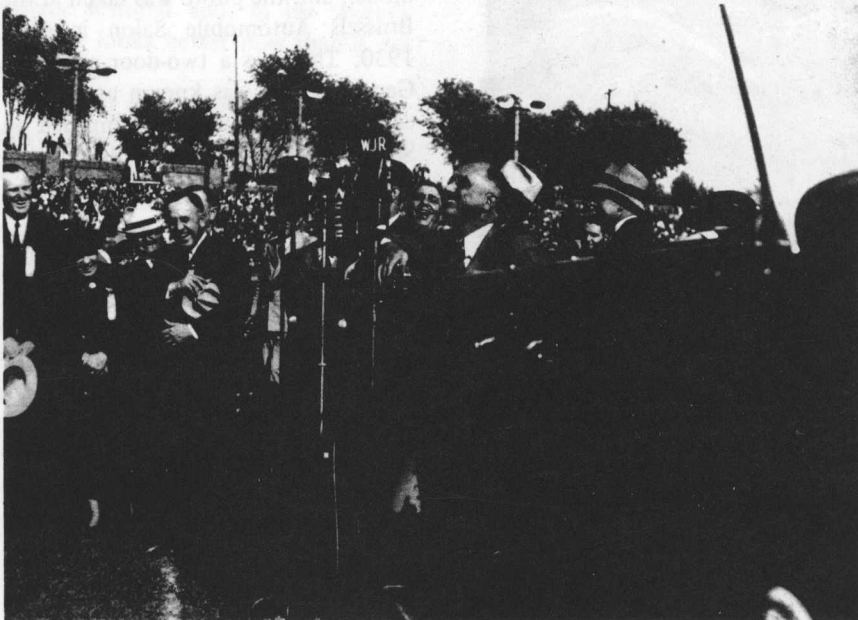
Warren G. Harding, in 1921, was the first President to ride to his inaugural in an automobile. Ronald Reagan should have been the twelfth President to motor down Pennsylvania before taking the oath of office—but he wasn't. The string started by Harding was snapped in 1976 when Jimmy Carter chose to walk.

The equine era is long gone from the White House, but it was not until 1951 that Congress passed legislation that officially eliminated the stables.

MVMA says that the first government-owned presidential car, a White steamer, carried President Theodore Roosevelt. Despite his reputation as a daredevil on horseback, the Rough Rider preferred the role of an automobile passenger.

William Howard Taft, his successor, was different. Taft was the "Barney Oldfield" of 1600 Pennsylvania Avenue. He loved automobiles—the faster the better. The hefty Ohioan once drove a Packard around a race course at 56 miles an hour, a fast pace for the early 1900's.

Taft left the five Buffalo-built Pierce-Arrows to President Woodrow Wilson. The World War I commander-in-chief was an open air devotee and would ride with his touring car's top down.



Franklin D. Roosevelt, seeking a second term in 1936, rides a Packard Phaeton in Flint, Michigan.

President Wilson wanted to see and to be seen. He drove an electric car that belonged to his wife, However, he gave up the plodding electric for a quicker gasoline engine automobile during his presidency.

Harding was driving before he was elected. While in the U.S. Senate he frequently drove home to Marion, Ohio, from the nation's capitol. Like Taft, Harding liked his cars to have get-up-and-go.

President Coolidge lived up to his moniker, "Silent Cal" when being driven in an official car. His speed range was from moderate to slow, and he favored the latter. He seldom spoke to the driver lest he distract him from his motoring manners.

By the time Herbert Hoover was inaugurated in 1929, the automobile

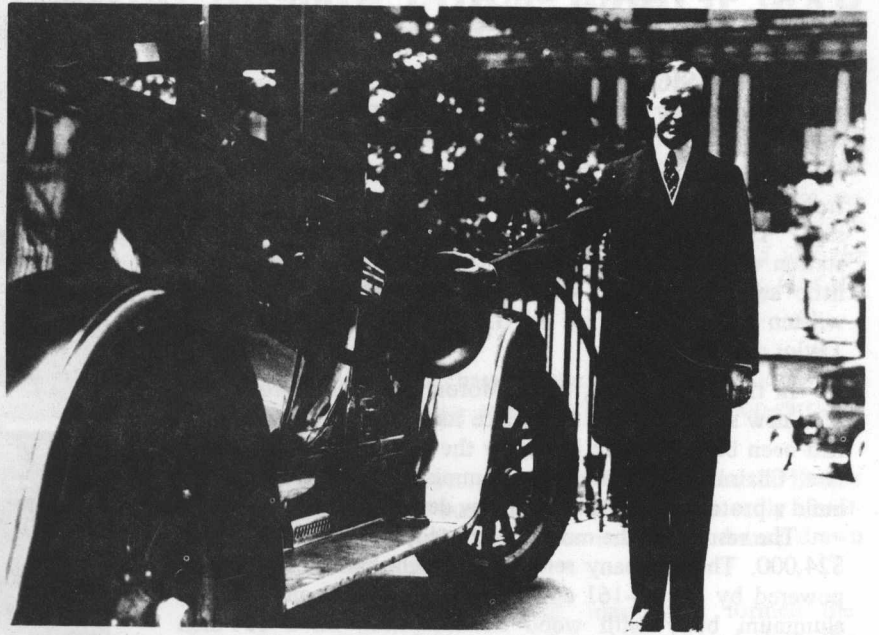
was firmly established as a necessity at all income levels. The engineer from California, like most Americans, accepted the auto as a normal part of one's daily life.

Franklin D. Roosevelt's limousine was as famous as his dog, Fala. The open air, armor plated vehicle with bullet-proof windows was well known throughout the land as the Sunshine Special. Like Taft, FDR was an auto buff. His personal car had hand controls, since he had been stricken with polio at an earlier time, and could not use his legs.

Harry S. Truman also rode the Sunshine Special. the same car that was fitted with a plastic top during the administration of Dwight D. Eisenhower. Americans called it the Bubbletop.

Of course, the limousines that carried Presidents John F. Kennedy, Lyndon B. Johnson, Gerald R. Ford, Jimmy Carter, and Ronald Reagan were equipped with all of the latest safety devices, electronic equipment and sophisticated communications.

They also had running boards.



President Calvin Coolidge with the White House Pierce-Arrow, about 1923.



President Harry Truman enjoyed driving and owned a Chrysler.

A WILLYS BY GHIA?

**THIS PROTOTYPE WILLYS WAGON,
DESIGNED AND BUILT BY GHIA,
WAS NEVER PRODUCED**

Early in January 1985 a group of photos was received from SAH President John A. Conde, along with a note which says, "These pictures were taken by Willys Motors of a custom station wagon built by Ghia in the early 1950's. Included is a little story about the vehicle, which is based on a memo written August 24, 1955, by G. C. Harbert to a Mrs. S. W. Taylor of Willys."

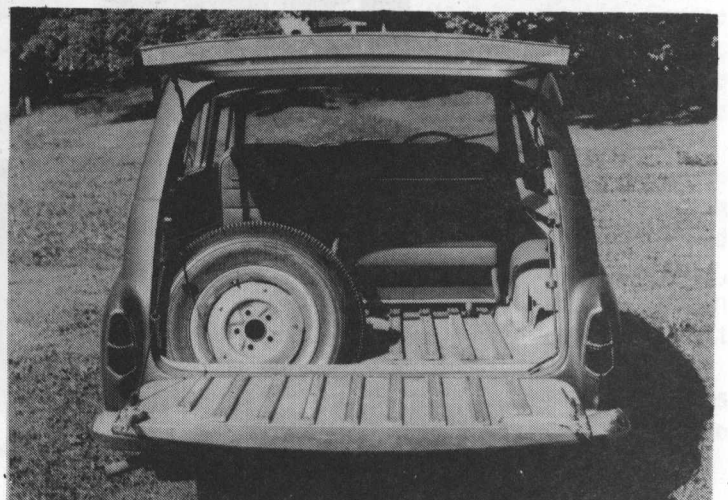
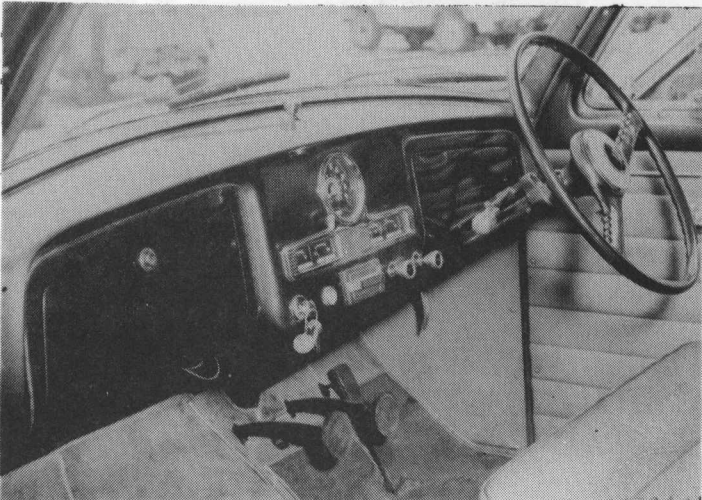
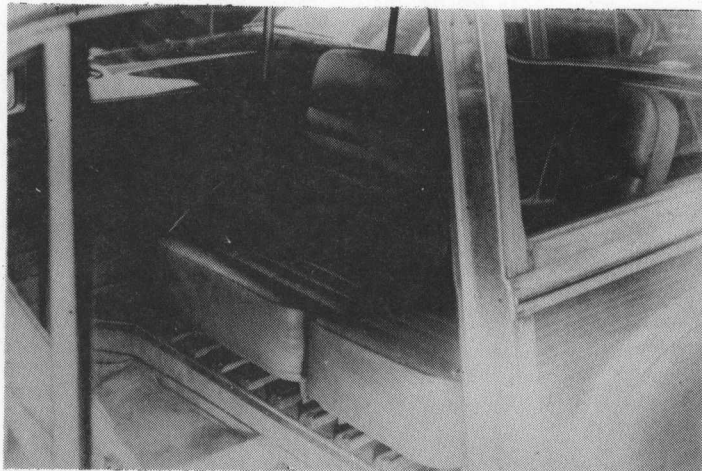
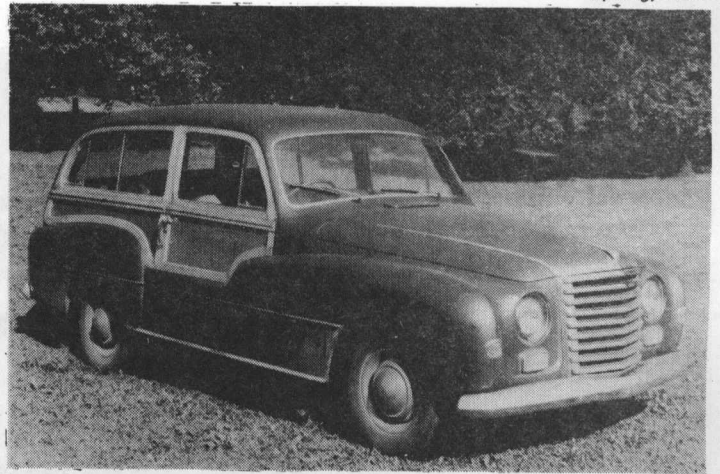
In the early 1950's, Willys Motors considered production of a new station wagon to replace its boxy all-steel models it had been building since just after the end of World War II. In fact, Chairman Ward Canaday commissioned Ghia in Italy to build a prototype incorporating new design ideas.

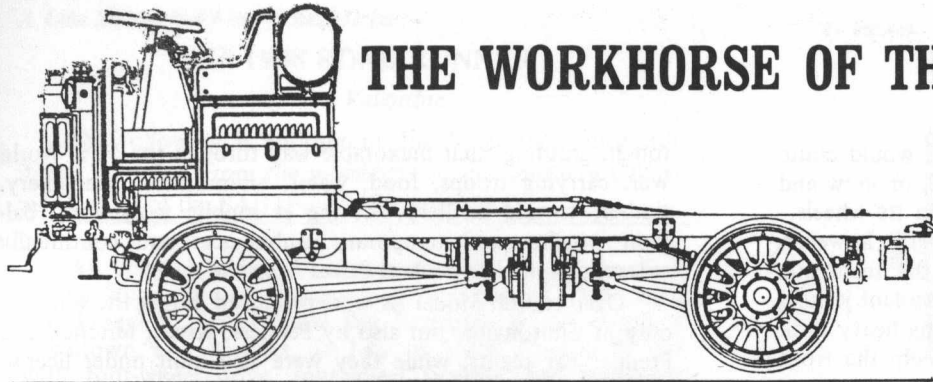
The result was the model illustrated, for which Willys paid \$24,000. The company sent Ghia a right-hand drive wagon, powered by the F6-161 engine. Ghia created an entirely new aluminum body with wood exterior trim, on a 104-inch wheelbase. Seats were upholstered in leather.

The pictures, taken in August 1955, show the vehicle after considerable use (probably by a top executive).

Observed G. C. Harbert, Willys' chief engineer at the time: "It is obvious, from looking at the pictures and the vehicle, that it is a nice-looking station wagon, but it was never designed to be built at a low unit cost."

As with all rather appealing prototypes, one wonders what happened to this one.





THE WORKHORSE OF THE FIRST WORLD WAR

This article, by British historian and SAH member Cyril Posthumus, is reprinted from Four Wheel Drive, February 1985, an English publication which, as its title suggests, is principally concerned with four-wheel-drive vehicles. Mr. Posthumus has served on the staffs of several automotive magazines, and was the European editor of Road and Track (U.S.A), 1969-1973.

When I was a boy in the mid-1920s, living near Kempton Park racecourse, a magical attraction was the huge park for redundant service vehicles left over from the First World War. There were Leylands, Albions, Thornycrofts, Halleys, Peerlesses, AECs, Guys, etc., and many high-built FWDs too, some grimly dirty, others seemingly unused.

I used to wonder what the initials meant until one day I went close up and read the maker's full name and address, all meticulously cast into the radiator header tank. About 25 years later, in France, I saw one of these self-same FWDs, differing only in having pneumatic tires, but still in service hauling great logs from a wood. I didn't know, but I was looking at a long-lasting example of the famous FWD Model B.

Although credit is due to Burstall and Hill, of Britain, Charles Cotta of America, and the Spyker brothers, of Holland, for their pioneer work on four-wheel-drive vehicles, full recognition must go to the Four Wheel Drive Auto Company of Clintonville, Wisconsin, USA, for proving the principle to the world and making it clear that drive on all fours was practical, advantageous, and reliable for carrying people, goods, and materials over terrain impassable to two-wheel drive. It was the Model B that did the deed.

The surprising fact that American roads, despite that nation's energy and forward thinking, were woefully bad early in the 20th century, helps to explain her early pre-eminence in four-wheel drive. By 1914, only 3,300 miles of road in the USA, mostly in the cities, was hard-surfaced, the remaining 1½ million or so miles being unmade, excessively dusty in summer and appallingly muddy in the winter. In wet weather, motor vehicles floundered through thick, wheel-dragging "goo" often bogged down in mudholes and having to be pulled out by horses, mules or oxen.

The state of Wisconsin, west of Chicago, had its full share of bad weather and resultant rutted, clogging clay roads, soft sand patches and other hazards; and in 1908 to immigrant Germans, William Besserdich and Otto Zachow, of Clintonville, decided to try to do something about it. Arguing that "a mule doesn't walk on two legs only—it uses all four," they set out to build a four-wheel-drive motor vehicle.

Ironically, about 160 miles away in Illinois, Cotta had designed his first four-wheel-drive system in 1900, selling it to a Milwaukee concern, the Four Wheel Drive Wagon Company, who improved the design by switching from chain to propeller shaft drive through a transfer box and three differentials, Spyker style, on their wooden-wheeled, four-wheel steering trucks in 1905.

When Zachow and Besserdich worked out *their* design, they inevitably followed the same principle, but employed only two-wheel steering with patent ball-and-socket joints. After experimenting with a converted White steam car their first petrol-engined 4WD was a large private car—the 45 hp Badger—which performed well enough to interest the US

Army, who ordered a chassis, fitted it with truck bodywork and subjected it to two severe cross-country troop-carrying tests.

Competing with several two-wheel-drive rivals, the Badger emerged triumphant, but hopes of orders were sadly unfulfilled, the Army deciding to rely on its horse and mule-drawn wagons for a few more years yet.

Zachow and Besserdich had, meanwhile, formed the Four Wheel Drive Auto Company (unconnected with the aforementioned Four Wheel Drive Wagon Company, of Milwaukee), switching from Badger cars to FWD trucks and struggling for survival until the First World War suddenly broke out in Europe. FWD sent two trucks, a three-ton and a five-ton, to Britain for demonstration and test, the result being a swift order for 288 three-tonners, another 82 from Russia, and many more imminent from the US Army. The fight for recognition was over.

The FWD three-tonner bought by Britain and others was the Model B, a rugged vehicle with permanent four-wheel drive and a Wisconsin proprietary four-cylinder T-head engine of 6390 cc and 56 bhp, governed to a maximum of 1000 rpm. This unit was installed at the front of a high, ladder-type chassis with straight channel-section side members, and drove through a wet multi-plate clutch and short, jointed cardan shaft to a central three-speed gearbox.

This box embodied a transfer shaft driven by a five-inch wide Morse silent chain and containing a differential which split the propeller shaft drives to front and rear axles; it was lockable for especially strenuous work, of which the appalling shell-torn battlefields in France and Belgium provided more than ample quantities.

With uniform drive to all four wheels, the load on an FWD could be spread equally over the chassis, unlike a two-wheel drive where it had to be concentrated over the rear wheels. The front and rear differentials were offset to the left and the axles had spring-loaded torque arms on each side. Spoked wheels (later steel discs) carried solid tires, and braking was by foot on the transmission and by hand to the rear wheels.

The driver sat to the right, high above the engine in an early example of forward control, without the luxury of a cab, while his five-spoke steering wheel acted through Zachow's patent ball-and-socket joints, sharing an oil reservoir with the universal joints on the half-shafts.

Suspension all round was by semi-elliptic springs, chassis weight was approximately 53½ cwt and the 'B' could carry its own weight in load. Fuel consumption was around six-seven mpg and speed just 14 mph with the governed engine or 20 mph without. But its virtues were less on the open road, where the hard springs and solid tires produced abominable pitch and bounce.

As many an FWD driver proudly said, "It would climb a house," although given enough wet clay, mud, or snow and clumsy throttle work, the Model B *could* spin its wheels—all four of them—and dig itself in. Driven properly, however, (and FWD ran special driver-training classes) the technique was to employ a slow, steady pull rather than violent jerking into action. Newcomers also found the steering heavy until they learned the knack of letting the power help the front wheels to steer.

In 1916, FWD met diversion in another theatre of war—Mexico—when the US Army set out to quell the Pancho Villa rising. Lorries of all kinds were hastily conscripted, journeying some 500 miles over desert and mountain country on an abortive raid which at least highlighted the superiority of four-wheel drive in wild, gruelling conditions.

Like Henry Ford, FWD used vanadium steel in many parts of the 'B' and allowed generous margins of strength throughout the vehicles. As a result, they proved incredibly

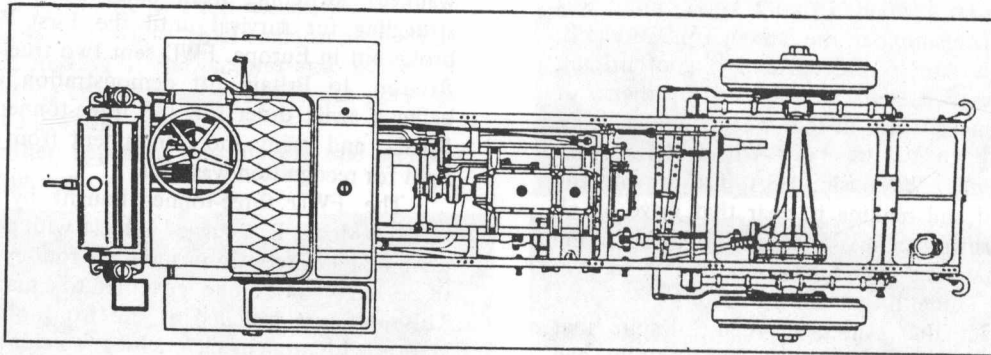
tough, grinding their inexorable way through the First World War, carrying troops, food, water, ammunition, machinery, timber, towing artillery, serving as mobile workshops, balloon winches and temporary ambulances and continually extracting mired two-wheel drives from the mud.

Over 16,000 Model Bs were produced during the war, not only at Clintonville, but also by Peerless, Kissel, Mitchell and Premier car plants, while they were also built under license in Britain, using Dorman engines.

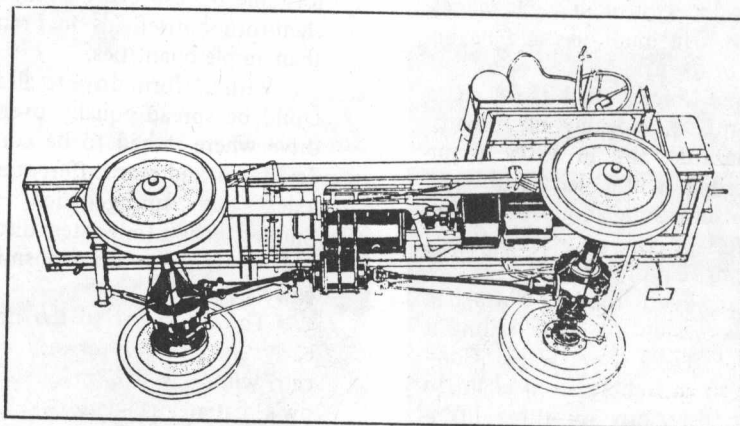
Other four-wheel drive trucks, such as the Nash 'Quad' [originally Jeffery 'Quad'], the Oshkosh, etc., were built in emulation, but it was the gallant 'B' which, 70 years ago, proved to the world that four-wheel-drive really worked and worked really well.

The FWD company is now a corporation, still turning out multi-drive vehicles of formidable traction. We thank them for help with information for this article.

(See photo of the Model "B" FWD on the back cover)



Plan view of the Model B chassis



Drive train of the Model B showing transfer case and three differentials

A Less Successful Four-Wheel-Drive -

THE 1908 ROAD RUNNER

by Jim Valentine

The following is another of Jim Valentine's interesting items, reprinted from the newsletter of the Southern California Chapter of the SAH (Fourth Quarter 1984).

An unusual bodyless automobile came out of the shops of the Road Runner Automobile Company of 1314 North San Fernando Street (now San Fernando Road), north of downtown Los Angeles, in July of 1908. Unusual it was, with four-wheel drive, four-wheel steering, and four-wheel brakes.

The president of the firm was Albert E. Yerkes; Morton H. Magie was the vice president, and M. D. Lafayette was the secretary. All resided in Los Angeles.

Designed by Morton H. Magie and Charles N. Winters of Bakersfield, California, the vehicle had been in work for about four years. Their new ROAD RUNNER had right-hand drive and a 124 inch wheelbase, with what appear to be 36 inch wheels. Its suspension was by means of a transverse semi-elliptical leaf spring at the front, with the same type placed longitudinally for each rear wheel.

Its six-cylinder engine was a proprietary Brownell-Trebert unit of 532 cubic inch displacement, rated at 60 horsepower. Its 4 3/4 inch bore and 5 inch stroke gave it nearly square cylinder dimensions.

The transmission, designed by Mr. Magie, was mounted amidships, with three forward speeds and one reverse driven by mated gears using constant-running chains, with gear selection by means of a clutching system.

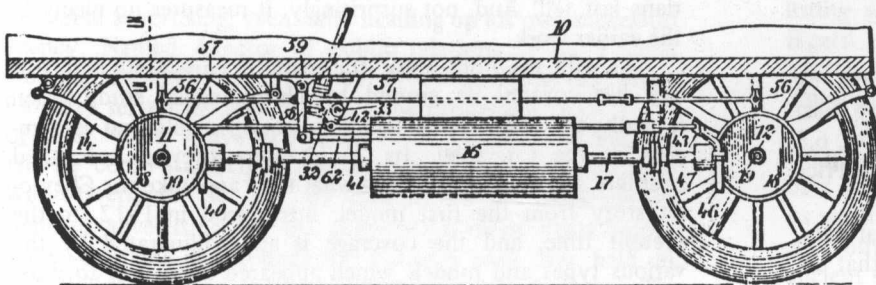
Driveshafts from this transmission fed differentials at the centers of the front and rear axle housings. The universal joint for each live axle was contained in a mostly spherical housing mounted just inboard of each wheel and brake drum. A brake rod for each wheel had its own spherical joint within the housing, with the steering rod pivoting the wheel by means of a tie-point on the exterior of the housing.

Steering was accomplished by pivoting the rear wheels in the direction opposite to that of the front wheels. Power or braking effort to any wheel was unaffected by any change in wheel angle. United States Patent No. 849,483 was granted on April 9, 1907, covering the features described.

The vehicle shown in 1908 appears to have matched the design features shown in the patent drawings, except for relative proportion and changes in the front suspension.

The firm planned to produce more cars of the same type, but it actually lasted only a few months beyond the introduction of the prototype.

This company, its participants, location, and product were unrelated to the Roadrunner Automobile and Power Company of 710 South Grand Avenue, Los Angeles, said to have shown a car of its own about 1904.



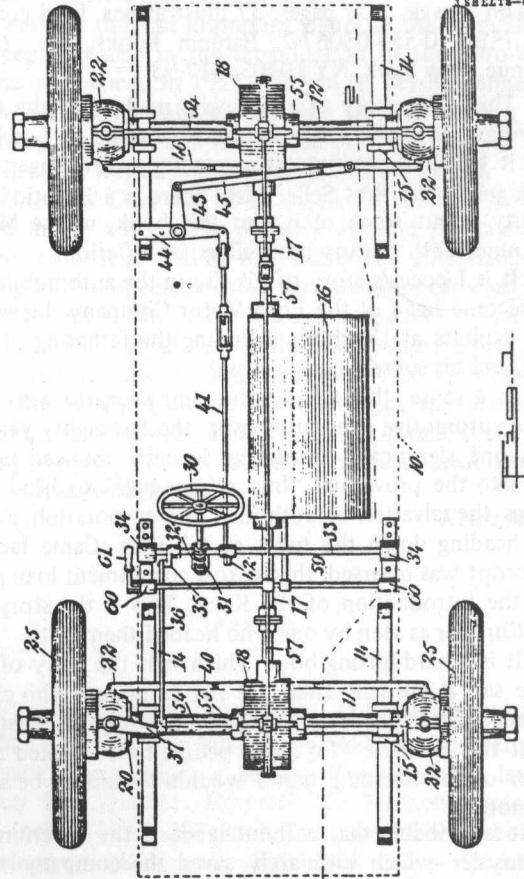
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MOTOR VEHICLE.

APPLICATION FILED MAR. 22, 1906.

1 SHEETS-SHEET 1.



WITNESSES:
C. A. Jernood.

Edgar B. Owens.

INVENTORS
Morton H. Magie
Charles N. Winters
BY
Muller
ATTORNEYS

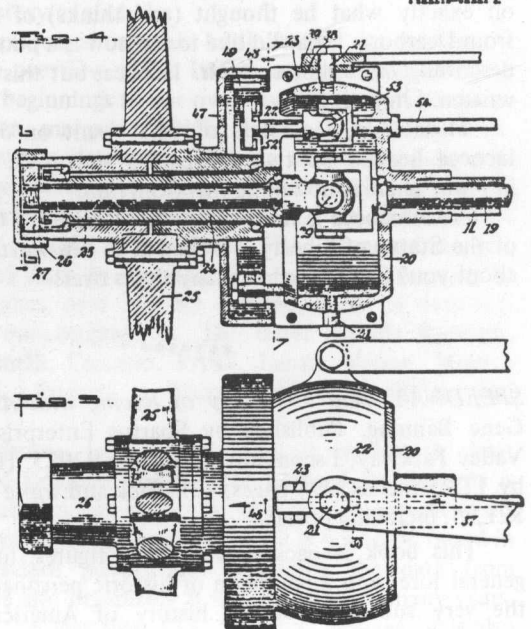
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1 SHEETS-SHEET 2.



BOOK REVIEWS

IACOCCA: AN AUTOBIOGRAPHY, by Lee Iacocca with William Novak. 320 pages. 37 illustrations, hard covers, 6" x 9". ISBN 0-553-05067-2. Bantam Books, Inc., 666 Fifth Avenue, New York, NY 10103. \$17.95.

This is the story of a man who made it to the top twice. Few have done this with the success similar to Lee Iacocca's, and it becomes obvious, after reading a few pages, why the book made the Best Seller List. There is a Horatio Alger-like quality about some of it, but this book, unlike Mr. Alger's late nineteenth century best sellers, isn't fiction.

It is Iacocca's story of his rise in the automobile industry to become head of the Ford Motor Company, his experience and exploits at Dearborn including the fathering of the Mustang, and his subsequent dismissal.

In a sense, this mirrors the same scenario with countless other automotive executives over the last eighty years or so—with one significant difference. Iacocca bounced back again just like the proverbial "Inja rubber ball" to head Chrysler. It was the salvation of both man and corporation, as Chrysler was heading down the tubes at the time. Came Iacocca and the script was reversed, thanks to a government loan guarantee and the introduction of the K-car. This is the story of Ford and Chrysler as seen by one who headed them both.

It is a hard-hitting book which tells the story of the man as he saw it himself. There are the detractors who claim that Iacocca had little or nothing to do with the Mustang, and about this he says: "So many people have claimed to be the father of the Mustang that I wouldn't want to be seen with the mother!"

It is probable that without Iacocca, the government loan to Chrysler—which ultimately saved the company—wouldn't have been made. It is more than likely that without the loan Chrysler would have gone out of business. There is a lot to be considered here, and there is a lot about it in this book.

There is a good deal of bitterness in the author's description—and his personal feelings—about Henry Ford II. It isn't a matter of suggestion or innuendo. Let's face it—Iacocca doesn't like Ford and apparently the feeling was one of mutual uncordiality. In this autobiography, Iacocca doesn't split hairs on exactly what he thought (and thinks) of the gentleman from Dearborn. What I'd like to see now is a book by Mr. Ford describing *his* opinion of Mr. Iacocca, but this may never be written. I hope it is.

Meanwhile, regardless of what went on or is going on, Iacocca headed up two companies and made excellent cars in both. There is no taking this from him.

Now Iacocca is head of the fund drive for the restoration of the Statue of Liberty. I kicked in to this worthy drive. How about you? She's worth it many times over!

Keith Marvin.

SPEEDWAY—Half a Century of Racing with Art Sparks, by Gene Banning. Published by Spartus Enterprises, 716 East Valley Parkway, Escondido, California 92025. Hardcover, 6.8 by 11.25 inches, 298 pages, 421 black and white photos. Price \$21.95, including postage.

This book is packed with facts, figures, technical data, general lore, and a pantheon of historic personalities that are the very substance of the history of American oval-track racing. One of the leading figures of that straightforwardly commercial and quite heroic sport is the main protagonist here. Until now, the limited attention which Art Sparks has

received in print has been all out of proportion to the significance of the role he has played.

After a few harrowing years as a stunt man in Hollywood in the early 20s, risking life and limb on motorcycles and in airplanes, Sparks built a Model T Ford-engined one-man racing car to campaign on western dirt tracks. Soon finding that he was a better constructor and tuner than driver, he found his career. He lived at the vortex of the gory, glory years of Los Angeles' Legion Ascot Speedway in the late 20s and 30s. That 5/8-mile oval was a veritable national academy for drivers, mechanics, and for engineering talent. This book includes more lap-by-lap detail on races on the western circuit than the reader may require, but it is there in amazing abundance, for the record. Sparks' cars came to be consistent winners, and they attracted several of the greatest drivers of the era. After becoming a dominant force in western racing, Sparks set his sights on Indianapolis, still building his own cars, most of them in uneasy association with playboy Joel Thorne. For five years in a row his machines recorded the fastest qualifying times at Indy, including three new track records plus one race win.

Having worked at die-making during World War II, right after the war Sparks introduced forged aluminum pistons for racing engines under the name "Forged True." He supplemented this soon-famous product with a breakthrough in high-performance valve springs. These achievements made him a sought-after expert internationally, counting Daimler-Benz, Ferrari, Jaguar, Meyer and Drake, and Porsche among his clients. He shared in the Offenhauser engine's last great stand by participating in the design of the turbocharged DGS (Drake-Goossen-Sparks) Offy. These are merely some of the high points of the story. That this book's writing, type-setting, editing, proof-reading (if any), and binding are arch-amateurish makes a curious contrast with Sparks' arch-professionalism. What counts is that wealth of precious information and photos has been preserved and made accessible to those who care about this aspect of automotive history.

Griffith Borgeson

CHEVROLET 1911-1985, by Richard M. Langworth and Jan P. Norbye and the editors of *Consumer Guide*. © 384 pages. More than 1,000 illustrations, including 89 in full color. 11¼ x 9¼ inches, hard covers. ISBN 0-517-44812-2. Beekman House/Crown Publishers, One Park Avenue, New York, NY. \$14.98.

This is a companion volume to *FORD: 1903-1984*, also with *Consumer Guide*® backing and published by Beekman/Crown Publishers (see *SAH Journal*, Nov.-Dec. 1983), which won special recognition by The Society of Automotive Historians last fall. And, not surprisingly, it measures up nicely to the earlier work.

As with the Ford book, the team of Langworth and Norbye has covered its ground by chronological study, which is really the only way to handle a history as old and as complex as the Chevrolet. Its 26 chapters—they're not called chapters, but this is in essence what they are—take the Chevrolet story from the first model, introduced in 1912, to the present time, and the coverage is aptly illustrated by the various types and models which appeared from year to year. And Chevrolet had lots and lots of variety. One extra in favor of this book over the earlier Ford one is the register of the pictures which, in many cases, were not clear throughout the Ford work.

continued ~>

This is an excellent reference source, but it is also far more than that. The story of the car and of those who guided its destiny over the many years has a fascination all its own. I found it hard to put down, and at times became almost personally concerned in reading the text, especially in the wheeling and dealing which went on in the days of William C. Durant, his allies, and their opposition.

Chevrolet 1911-1985 is an exceptionally good piece of research and writing, and I think one look will convince you.

Keith Marvin

BY ONE AND ONE, by Doreen Canaday Spitzer. 305 pages, 109 illustrations. Hardbound. ISBN 0-914016-98-9. Phoenix Publishing, Canaan, New Hampshire 03741. \$20.00.

This is the story of a remarkable couple, written by a daughter who had the initiative and perception as well as the love and writing ability to set down the facts as seen through the eyes of a child, and later, those of an adult. It is a biography which chronicles much heretofore unwritten material surrounding Ward Murphey Canaday, who, among his many accomplishments, headed Willys-Overland. This isn't by any means the story of the W-O president and the intricacies associated with that post. It is, rather, a biography of dad (and mother too), but from a personal and human approach. There is a good deal of historic material dealing with Ward Canaday and his connections with the automobile industry, of course, and I find the account both interesting in the extreme as well as poignant and reflective of a time and a way of life which isn't with us very much more.

Author-daughter Doreen Spitzer is the wife of Princeton University astronomer Lyman Spitzer, Jr., mother of four, grandmother of seven, and one who spent several years at the American School of Classical Studies in Athens, has traveled extensively in Greece, Italy, and the Middle East, and who is today a docent at the Princeton University Art Museum.

It is difficult to evaluate such a book and then try to write a review with emphasis on only one of this unusual and talented pair, but Ward M. Canaday is the character on which I must focus here.

And he was something of a character, and a highly talented character, as well as being a successful businessman, a man of many ideas, and a successful husband and father. Doreen Spitzer introduces the family—both sides of it—before their birth, so the reader gets a pretty good idea of both father and mother, their childhood, courtship, marriage, and many talents in several fields.

Ward Canaday began his married life as advertising manager for the Hoosier Kitchen Cabinet Company in New Castle, Indiana. Anyone of my generation (I'm 60) will recall Hoosier Kitchen Cabinets, one of the most common and utilitarian sights of the American kitchen between the turn of the century and decades thereafter. He subsequently went into magazine advertising, eventually heading up his own successful agency. Named director of public relations of the Federal Housing Authority in 1934 by President Roosevelt, Ward Canaday served the post well, but fate intervened by the death of John North Willys in August 1935. Having done what he felt he could for FHA, Canaday assumed the presidency of Willys-Overland. He was no stranger to the firm, having handled advertising for the corporation many years before. Willys-Overland was foundering; Canaday took over, held on, and Willys-Overland made a comeback in the industry. The Willys car wasn't exactly a worldbeater, but it wasn't intended to give Ford or Chevrolet a run for the money either. It held its own and it survived.

We all know how Willys-Overland bested both the American Bantam and the Ford for the significant contract in the development and manufacture of the Jeep, and it was Canaday who played an active role in its production.

He was not only an important figure in the manufacture of the Jeep, but also in the introduction of the Aero-Willys which was introduced in 1951. "It had its devoted adherents for years," writes the author, "but the car was never a best-seller." Alas, it wasn't, and more's the pity. I had one of these cars and in some ways it was the best car I ever owned.

By One and One will be of particular interest to those interested in the automobile industry and the magnates who were involved in it as well as Willys-Overland aficionados and advertising buffs, especially those who are geared toward automobile advertising. The book is a good deal more than that, however, and will appeal also to those who enjoy biographies. This, as noted, is the story of a remarkable couple, but it highlights the life of one of the more interesting personalities, both automotive and otherwise, and it will serve as one of the more interesting personal stories of the American ideal and the ambition of two who shared it.

Keith Marvin

LE PICCOLE GRANDI MARCHE AUTOMOBILISTICHE ITALIANE (The Great Little Italian Automotive Marques), by Augusto Costantino, in Italian. Published by Istituto Geografico De Agostini, Novara/ECO, Torino. Hardcover, 9 x 11¼ inches (229 x 298 mm), 112 pages, 200 photos and 25 drawings in black and white. Mail orders to Istituto Geografico De Agostini, 28100 Novara, Italy. Price, including postage, to UK and USA: 27,000 lire; by registered mail 28,500 lire; via air mail to USA 36,000 lire.

The author of this unique reference work headed the Centro Storico Fiat and its vast archives for nearly a quarter-century. At present, among other things, Costantino is a consultant to Torino's great Museo dell'Automobile. He is one of the world's most knowledgeable authorities on Italian automotive history as a whole.

What is unique about this book is that it presents a comprehensive overview of the Italian automotive industry at large, from its beginnings to our own day. It generally excludes the best-known marques, which already have been documented extensively elsewhere. Separate chapters are devoted to such relative esoterica as Ansaldo, Aquila, Italiana, Bianchi, Ceirano, Chiribiri, Cistitalia, Diatto, FATA, FOB, Itala, Junior, Nazzaro, OM, OSCA, SCAT, Siata, SPA, Standard, Storero, Temperino, and Zust. In addition to these more important of the smaller makes, over 250 are covered, either in statistical listing or in mini-biographies. The latter include Bernardi, Bigatti e Gulinelli, Carcano, FAST, Lanza, Menon, Miari e Giusti, Nardi, Prinetti e Stucchi, Ricordi, SIVA, and Taurinia.

This handsome, large-format book is written in clear, straightforward language and the precision of its contents is of a high order. An abundance of rare photos complements its wealth of information, most of which is not to be found in any other modern publication. Gathering the data from ancient sources and organizing it was the labor of many years. At about \$15, or less than £12, including postage, it is also an excellent value.

Griffith Borgeson

CENT ANS D'AUTOMOBILE FRANCAISE, by Jacques Rousseau and Jean-Paul Caron, in French. Published by Flammarion, Paris. Hardcover, 10.5 x 12.25 inches, 358 pages, with 471 photos in color, plus 226 more in black and white. ISBN 2-08-012022-0. Price 475 francs.

With its very large format and weight in excess of five pounds, this is one of the biggest and most sumptuous books ever devoted to the automobile by a French publisher. This is entirely fitting, given the importance of the centennial which the French automobile manufacturers' association elected to celebrate in 1984 and to which this book is a tribute and a monument.

It is essentially a picture book, in which 61 marques are presented in alphabetical order, constituting a color panorama of a century of evolution. This 273 page section is preceded by three color pages which are devoted to the at-last-famous Delamare-Deboutteville et Malandin vehicle of 1884, described as "the ancestor of the modern four-cycle gasoline automobile." Caron's excellent photos, often full-page and occasionally double-spread bleeds, are accompanied by long captions and blocks of text written by engineer/historian Rousseau, who knows his subject to perfection. The largest allotment of pages goes to Renault, with 28. Peugeot rates 24, Citroen 22, and Bugatti and Hispano-Suiza 16 apiece. Delage, Delahaye, and Panhard et Levassor have 14 pages each to themselves, while Talbot has ten and Voisin eight. This leaves 107 pages for marques of lesser fame, from Alba to Unic. The color section is followed by a 25-page year-by-year chronology of the automobile's development, high spots of which are illustrated with over 200 black and white photos.

This art book opens with a two-page retrospective foreword by Jean Panhard, son of super-pioneer Paul Panhard. Then come 26 pages of preface or introductory text, authored by a member of the Academie Francaise, in itself a mark of prestige. The member, Michael Deon, rambles over the century in question for the benefit of a public which knows little about automotive history. The initiated will find little in Deon's text which they did not already know. They will find a number of glaring errors, such as attributing the origin of the modern front-drive car unconditionally to J. A. Gregoire. It is the rich collection of Caron photos, backed up by Rousseau's text and gorgeously presented, which will sell this landmark volume.

Griffith Borgeson

FIRE RIGS FIGHTING FIRES, by John F. Sytsma. 160 pages, 148 black and white illustrations, hard bound, 11-3/8" by 8-3/4". John Sytsma, 3280 Country Club Drive, Medina, Ohio 44256. \$29.95.

This is a bonanza for all those fire buffs out there who enjoy pictures of firefighting equipment engaged in those pursuits for which they were created. We have had numerous compilations of fire apparatus over the years, but generally depicting that rolling stock on display rather than in action.

Combining carefully chosen photographs dating back to the turn of the century, excellent captions which serve as text, and top quality paper stock, *Fire Rigs Fighting Fires* is a joy and delight to read, and once it is out of print it will become one of those collectors' items you will want badly but somehow never find. Fire bugs (or rather, fire buffs), check this one out while you can get your hands on a copy. I did and I'm glad.

Keith Marvin

AMOSKEAG STEAM FIRE ENGINES, a reprint by the Manchester Historic Association. 55 pages, 12 illustrations. Soft bound, 6" x 9". Manchester Historic Association, Manchester, New Hampshire 03101. \$2.00

For the historian whose predilection on road vehicles borders on the esoteric and the arcane, this is a tailor-made brochure to whet any appetite for oddball road locomotion. It isn't a recent publication, but it is to me, and I've been so captivated by its historic worth that I feel compelled to share my findings with SAH members. The price is unrealistic. One can't find anything of value for two bucks these days, with this one exception, and believe me, please do; it is worth many times the price.

The Amoskeag Locomotive Works, of Manchester, New Hampshire, was widely known in its time, and its name was a watchword for quality. It began building steam fire apparatus in 1859 and went out of business in 1906, and although the rank and file of this fire-fighting equipment was horse-drawn, a grand total of 22 self-propelled steam pumpers left the works during that time.

The self-propelled Amoskeag Steamer shouldn't be considered a conventional car or truck, but rather a road wagon. The "Double Extra First Size Steam Fire Engine" as shown in this brochure was a behemoth with a capital 'B,' measuring ten feet in height, 16 feet 6 inches in length and 7 feet 3 inches in width, with an overall weight equipped for service of a whopping 17,000 pounds, and a pumping capacity of 1350 gallons per minute. It must have required tremendous strength to handle that steering wheel but it was done here and there, in such places as these huge machines were placed in service.

A listing of the 713 Amoskeag fire engines already produced when this brochure was initially published in 1895 is included. This is a most unusual and especially valuable publication which, spinoff as its offerings might have been, owns a viable place in automotive history as we know it.

Keith Marvin

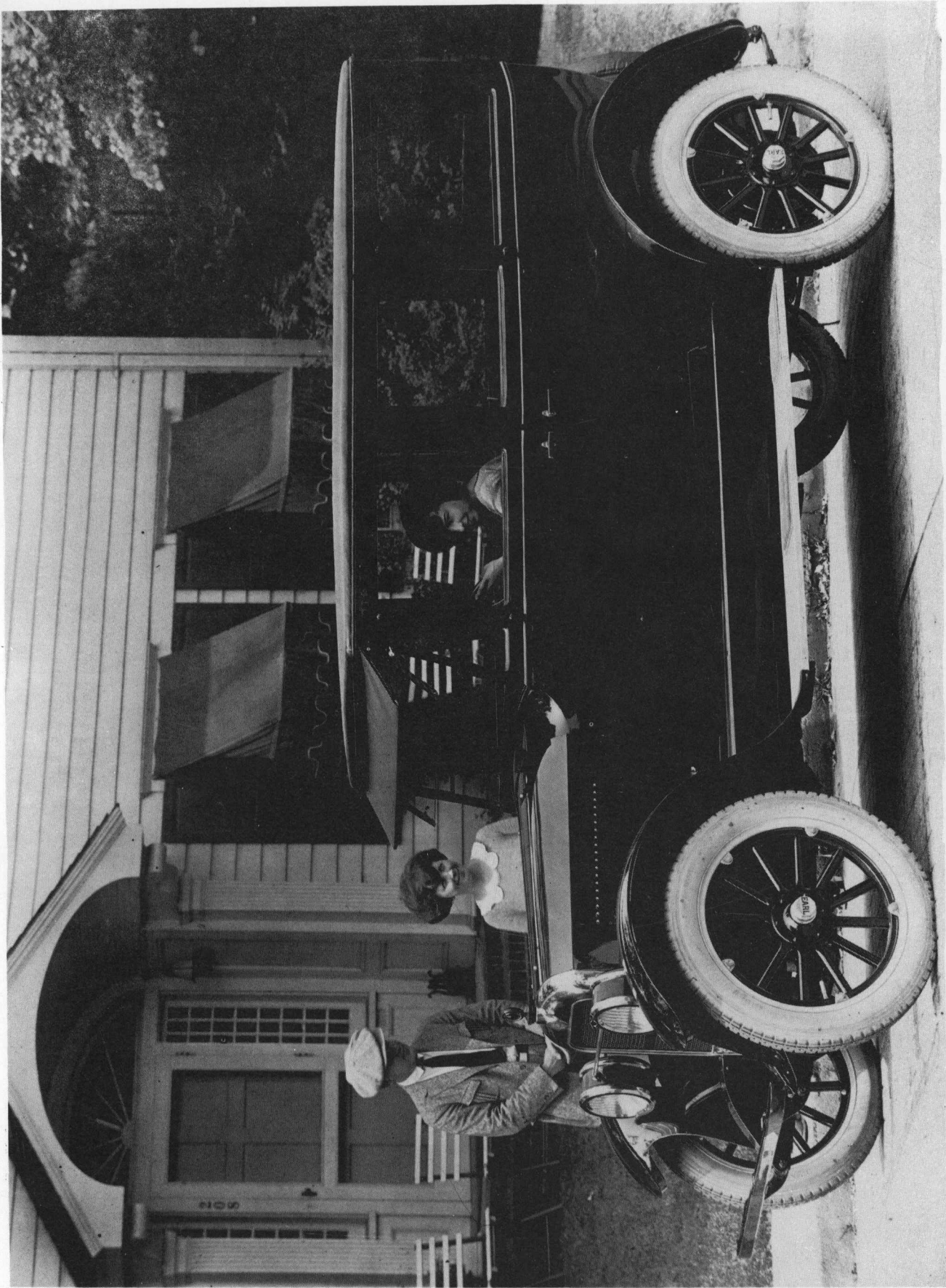
CAR DESIGN: STRUCTURE & ARCHITECTURE, by Jan P. Norbye. 384 pages, 327 black and white illustrations, soft bound, 7" x 10". ISBN 0-8306-2104-0. Tab Books, Inc., Blue Ridge Summit, Pennsylvania 17214. \$19.95.

This is an interesting work because far too many of us, I think, take automobiles, their design and development for granted. This is the story of what basic design is all about, its trials and tribulations over the decades, and related subjects dealing with why cars are built as they are.

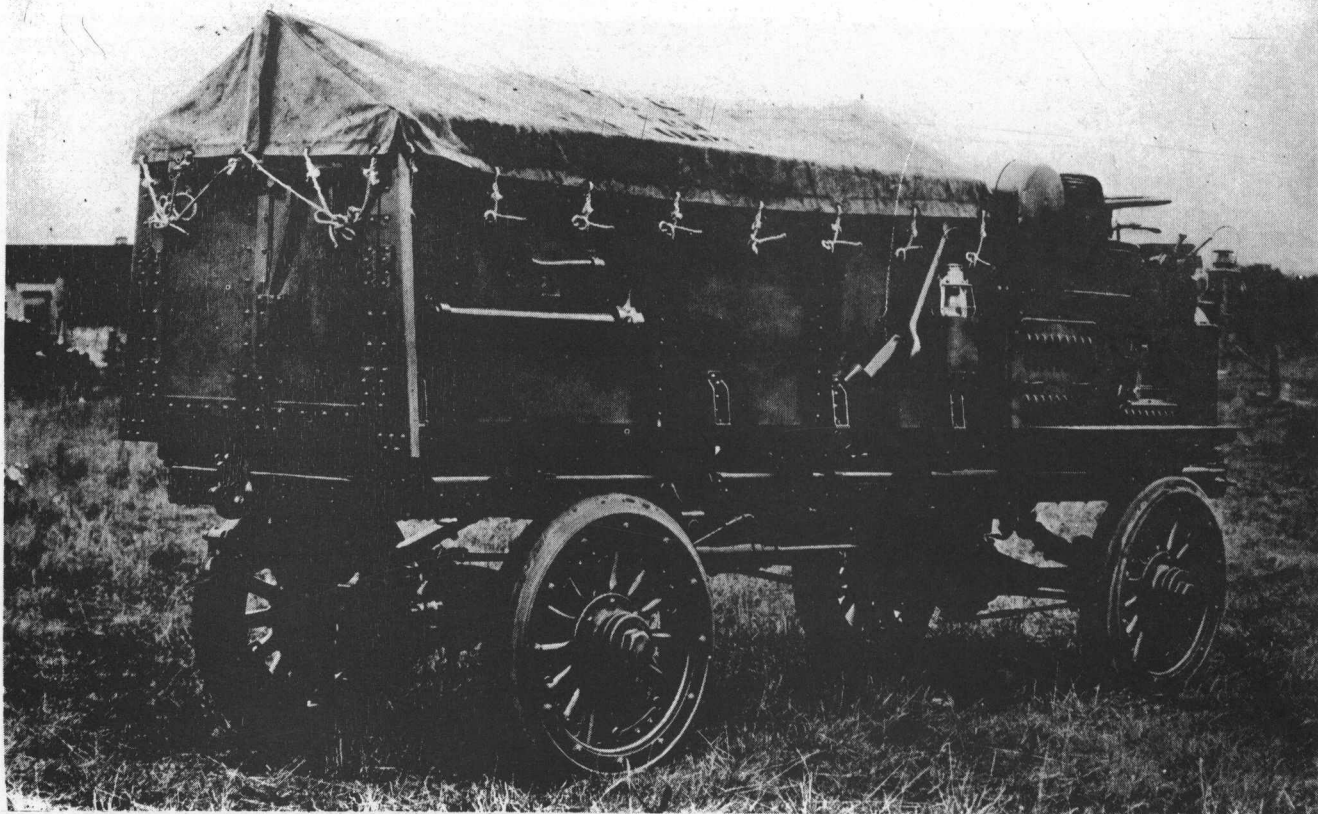
It is a massive field in which Norbye has labored, and he sets down his findings very well indeed from every conceivable aspect including safety considerations, ways in which to increase comfort while at the same time emphasizing economy and ease of operation, and such mundane but generally overlooked subjects as to where the engine is best located and why the front and rear seats should be placed this way instead of that.

If your interest in cars is on the surface only, forget this one. If, however, you have a real interest and would like a real insight as to why cars have evolved over the years as they have, plus a glimpse into the future, look into this. Norbye has been a consistently sound theorist and writer over the years, and this is one of his best studies to date.

Keith Marvin



1922 Earl Sedan, made by Earl Motors, Inc., Jackson, Michigan, 1921 through 1923. The Earl succeeded the Briscoe, which had been built since 1914. Factory photo loaned by George H. Brooks, Trammere, South Australia.



The Four-Wheel Drive FWD Truck, Model B—the Workhorse of World War I. (See story, page 17.)
Photo from The Four Wheel Drive Story, by Howard William Troyer, McGraw-Hill, 1954

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