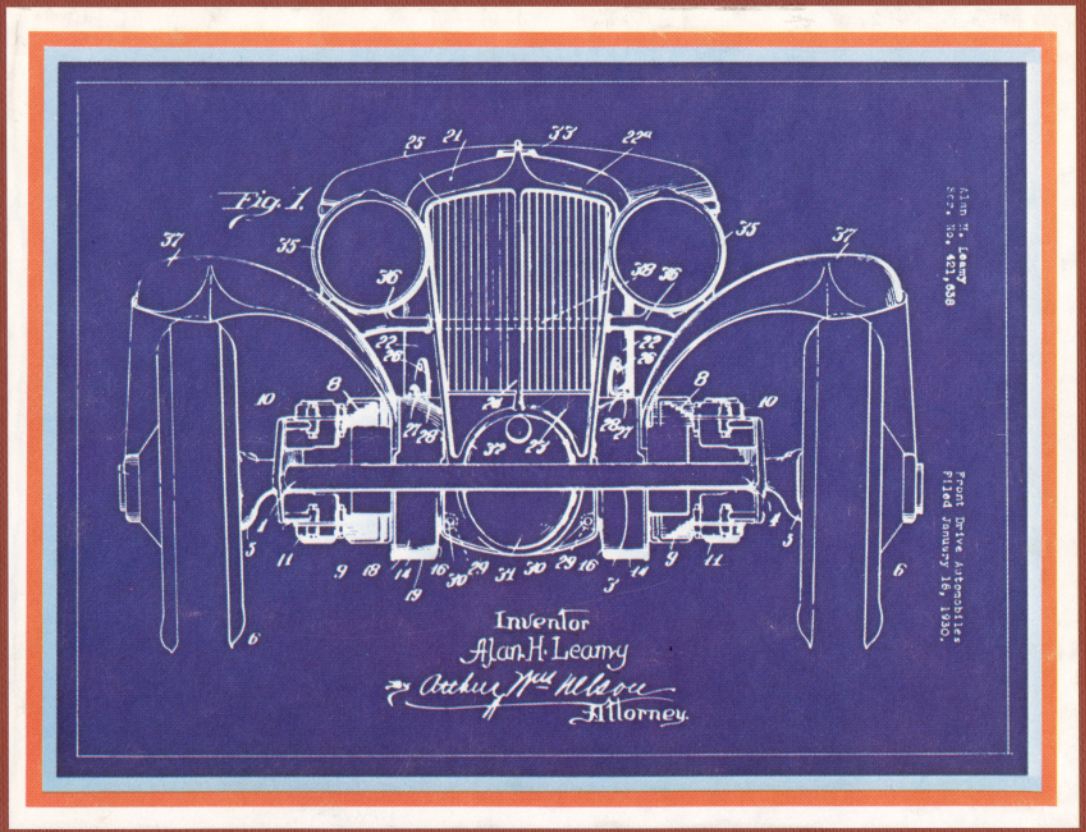
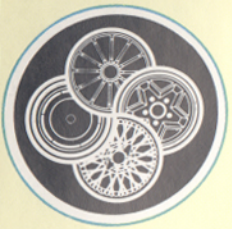
AUTOMOBILE
Quarterly



20th Anniversary Edition

In this issue we consider three distinguished and very different careers.
Griffith Borgeson recounts the adventurous, heroic life of the late W.F. Bradley,
the most eminent automotive journalist in the English language.
There is an account of the wooden monocoque automobiles of Frank Costin,
that designer of flagrantly unconventional cars with superb aerodynamic properties.
Then, with the aid of a comprehensive selection of his drawings, Dan Burger evaluates
the legacy of designer Alan H. Leamy, whose most celebrated creation is the L-29 Cord.
We chronicle the development of two automotive tours de force, separated in time by more than fifty years.
First, there is a history of Knox, the first aircooled production car to be manufactured
in any significant quantity. Then Roy Query's photography highlights the Lotus 38
that Jimmy Clark drove to victory in the Indianapolis 500 of 1965.
For those who are fascinated by the aesthetic aspects of automotive history we explore
some trends in luxury coachbuilding during the years between 1909 and 1932,
and focus upon two exceptionally fine representatives of that period.
Rick Lenz's photographs capture the startling beauty of the 1930 Ruxton sedan,
whose lowness is dramatized by designer Josef Urban's bands of brilliant color.
Finally, we look briefly at the S.S.I Airline Saloon, one of Jaguar's precursors,
a car whose cautious concessions to streamlined design have drawn mixed reviews over the years.



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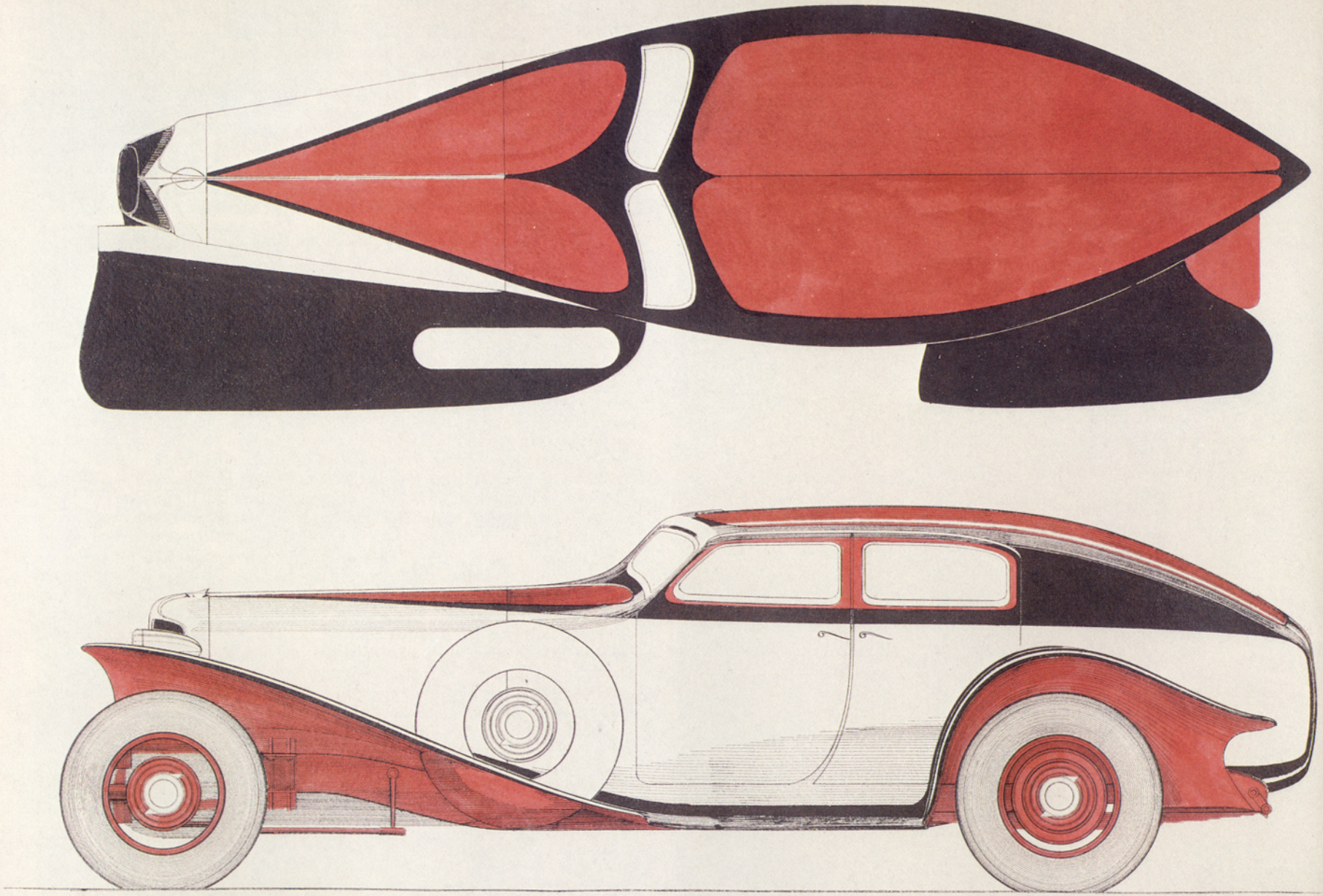

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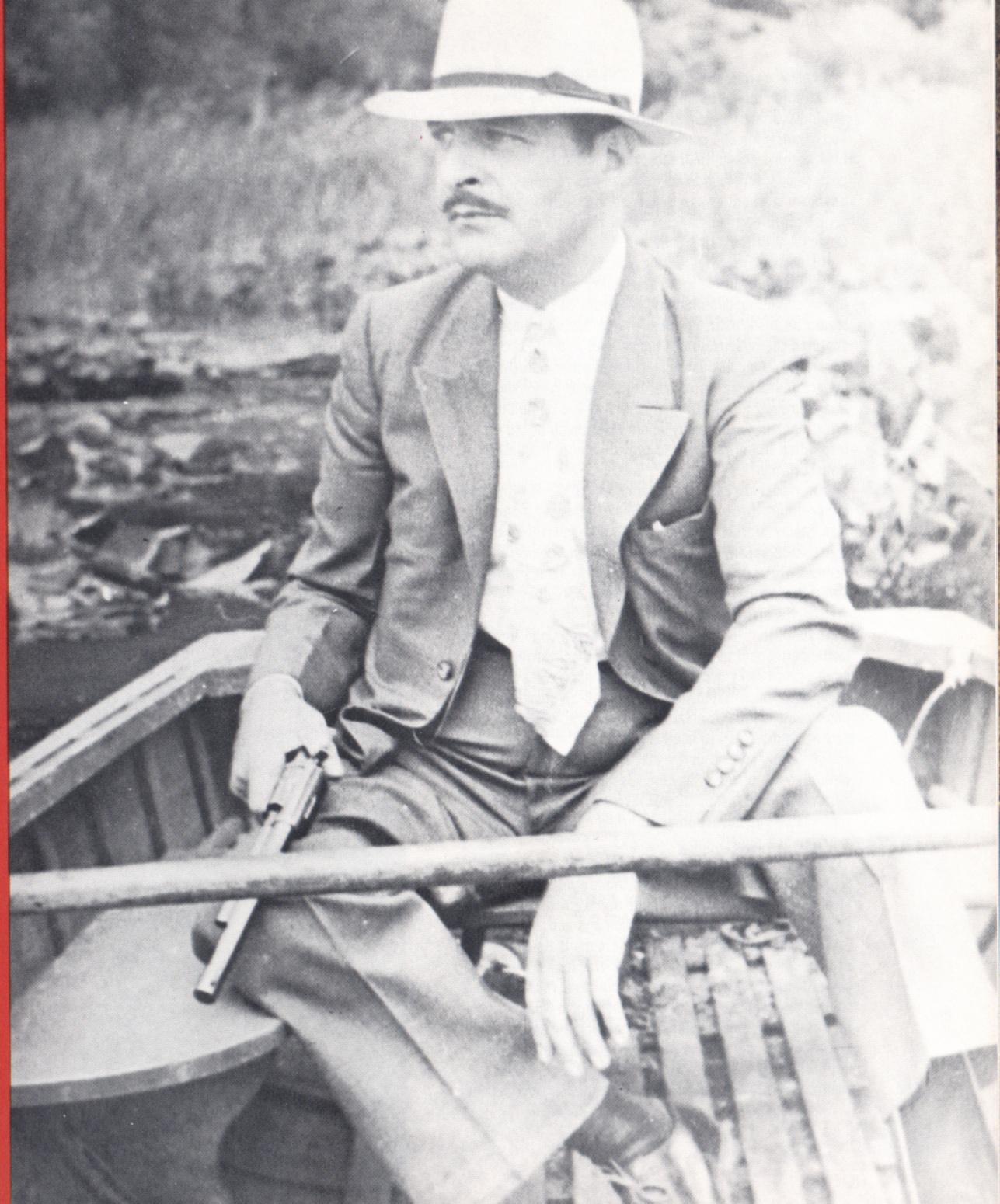
E-D 4 Place Cabin Speedster.

The Career and the Creations of Alan H. Leamy

By Dan Burger



Of those who have admired or even acquired examples of the automotive design of Alan H. Leamy, only a few would associate his name with the automobiles he styled. Today museums and collectors of fine automobiles place his creations among their most highly regarded possessions. Although Leamy himself has remained nearly unknown, authorities agree that the work of this self-taught stylist captured the essence of what has been called the Golden Age of the automobile.

His designs, executed during a period of less than ten years, were among the most noteworthy creations of the American automobile industry. His peers had enormous regard for his artistic abilities. The products of these skills captured the imagination of the general public. Leamy's work had a distinct quality that makes an immediate impact and commands instant recognition. Fortunately, he was employed for most of his career by the uninhibited Errett Lobban Cord. Leamy would offer much of the inspiration in Cord's quest to provide "more than mere transportation."

Alan H. Leamy was born on June 4th, 1902 in Arlington, Maryland. At the time of his birth his father, also named Alan Leamy, worked in Baltimore as an employee of the Welsbach Company of Philadelphia, a manufacturer of gas mantles. But when the child was three the family moved to Columbus, Ohio, where the elder Leamy served as Welsbach's district manager.

At about that time young Alan contracted polio, resulting in the permanent impairment of his left leg. During his adult years Leamy depended for mobility on a leg brace and cane, and compensated for his handicap by dressing impeccably, with conservative elegance. He loved fast driving, and learned to use his arm to lift his leg onto the clutch so quickly and deftly that some of his passengers were unaware of the procedure. Despite his disability he became an enthusiastic hunter. Eventually he built up a respectable gun collection and worked on designs for experimental bullets and gun stocks.

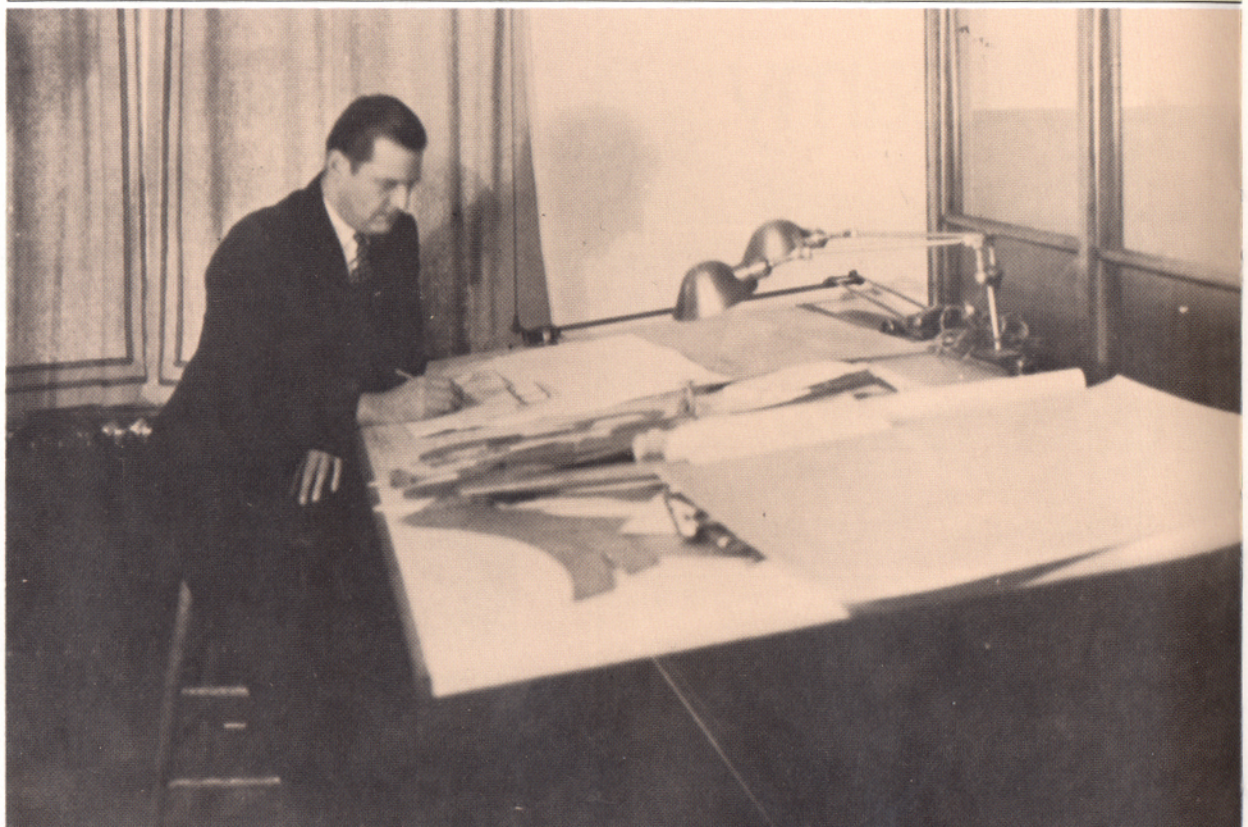
Although Leamy may have been endowed with natural artistic aptitude, those who knew him during his childhood claimed that his handicap became an incentive for sharpening his powers of observation and concentration, intellectual ability and zeal for achievement. He had drawn cars since his earliest boyhood, and later took a correspondence course in architecture. As a young man he showed his bride the group of row houses in Atlantic City that he had designed. Later, while working in Auburn, he attended anatomy classes in Fort Wayne. Although he did not pursue his full-time education beyond high school, Leamy read widely in the fields of music, literature, science and medicine, and older acquaintences found him an engaging and remarkably well informed conversationalist.

In 1925, when he was 23, Alan Leamy married Agnes Garrett of Swarthmore, Pennsylvania, daughter of Sylvester Garrett, founder of Philadelphia's Garrett-Buchanan Paper Company. The prospect of a disabled, self-educated in-law who was as yet uncommitted to a profession was unappealing to the family. During this period Leamy was unhappily occupied in selling real estate for the financially unstable Samuel Bader Agency of Ventnor, New Jersey, and devoting much of his leisure time to making sketches of automobiles.

Sympathizing with his son's love of cars and evident artistic talent, Leamy's father then wrote to Thomas Litle, Jr., a former colleague at Welsbach, who had gone on to become chief engineer at the Marmon Motor Company in Indianapolis. Litle's response to the elder Leamy's recommendation of his son was both gracious and generous. "I am only too glad," he wrote, "to champion the cause of a boy who is just starting out, and who has, I believe, considerable ability and I will watch him as closely as I would my own son and try to advise him accordingly." Thus Leamy's eighteen-month career as a real estate salesman came to an end and his automotive career was launched.

Alan Leamy worked at Marmon under the tutelage of Litle between March 1927 and April 1928. Gradually he became dissatisfied there. Mrs. Leamy recalls that Alan was an admirer of the designs of such European manufacturers as Hispano-Suiza and Isotta-Fraschini. "He felt American cars were too conservative, too far behind the design and engineering features of the foreign cars." As an admirer of

Alan Leamy in his office on the second floor of Auburn Automobile Company's Administration Building. The range of his interests was wide, as is shown by the designs to the right: an improved bullet, a proposed mascot, and two drawings for Marmon: a Marmon 78 Four-Passenger Sport Touring Car from May 16th, 1928 and a new grille interpretation from May 6th, 1927.



the lighter colors—especially the pastels—favored by European coachbuilders and as one fascinated by the experimental front wheel drive cars of the period, Leamy found the prevailing philosophy at Marmon staid and restrictive; he was eager for a more promising opportunity to develop his personal theories about automotive design.

Based as he was in Indianapolis, Leamy learned of E. L. Cord's intention of manufacturing a front wheel drive automobile, and wrote to him in the hope of obtaining a position. Cord referred the letter to the chief of the front wheel drive project, Cornelius Willett Van Ranst. In April 1928 Van Ranst directed Leamy to meet with him at the Duesenberg factory in Indianapolis, site of the restricted-entry section in which the front wheel drive project was underway. Van Ranst was so impressed with the sketches Leamy showed him that he passed them to Cord, whose response was equally favorable. Thus, in August 1928, the young man assumed the enviable position of chief stylist for America's first front wheel drive production car.

At Auburn Leamy found himself among a select group of consultants and staff members who included some of the pioneers of American front wheel drive technology. Harry Miller, from whom the basic front wheel drive layout was obtained, lent his expertise as a consultant. Cornelius Van Ranst coordinated the joint efforts of Leon Duray, Leo Goossen and Harry Miller to translate Miller's racing car designs into a viable passenger car concept, and to integrate this concept with Auburn motor and transmission components. Chief engineer Herb Snow and body designer John Oswald were two other important co-workers.

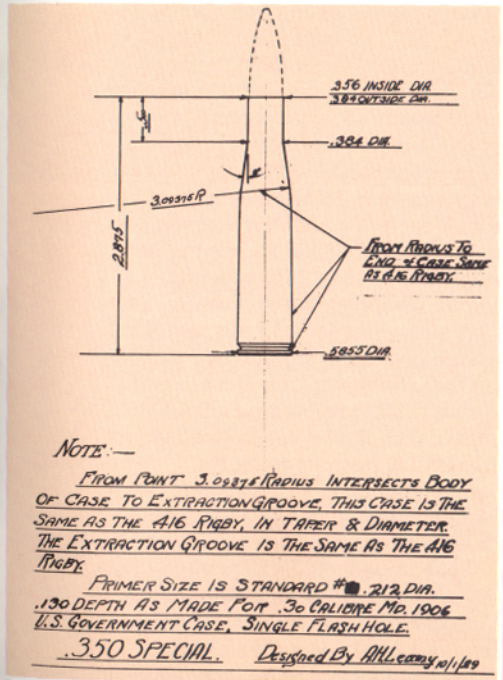
Since Auburn was a small manufacturer, Leamy had major responsibility for the design of the new car's interior and exterior. This gave him the opportunity to actualize his theory that the successful car must be designed as a unit. Given an environment conducive to fresh thinking and experimentation, Leamy made changes that dramatically altered the products of the Auburn Automobile Company. These innovations would be absorbed by the American and European automotive industries.

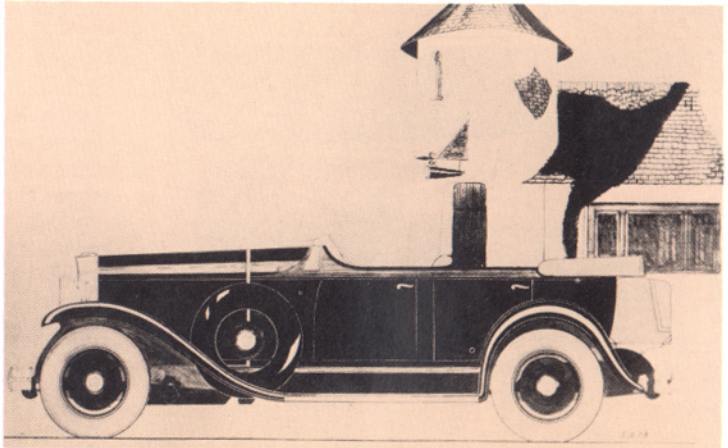
In Leamy's execution of the L-29 Cord body design, new conceptions of styling were introduced. Because of the front wheel drive factor and the lowness that allowed, Leamy enjoyed the luxury of a chassis that would permit his design to attain its maximum effectiveness. The L-29 Cord was, indeed, the unified creation that Leamy had desired. While the front wheel drive mechanism was acclaimed for its technological advancement, the L-29's exterior design caused as great a sensation throughout the automotive world, and received equally enthusiastic coverage in the international press.

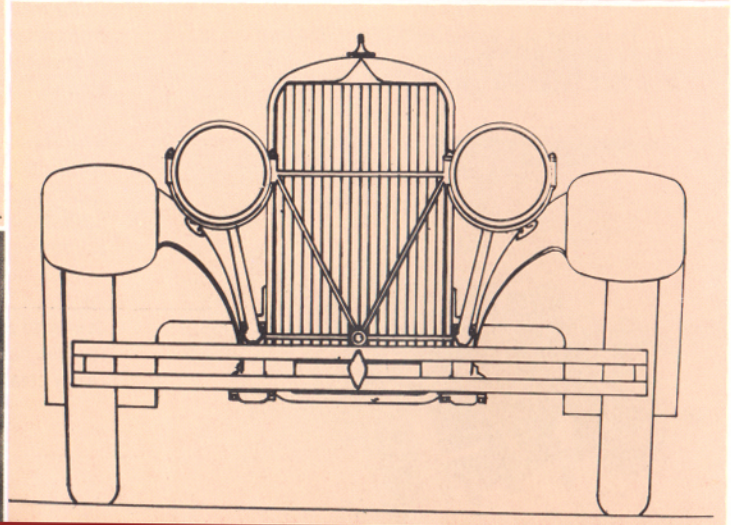
Strother MacMinn, noted educator in the field of automotive design at the Art Center College, Pasadena, a designer with informed insight into the classics, describes Leamy's work as "artful interpretation." "Al Leamy was an extraordinarily talented designer," says MacMinn. "The exaggerations that he was able to include in the design of the radiator, the flair of the fenders, and the placement of the elements on the front of the car, for example, were masterpieces in discretion and proportion." Notable among the car's design attributes is the appearance of unity reflected in meticulous detail. Even the dust shield, which covers the fuel tank and frame, is embossed with the design that is also prominent on the radiator and fenders.

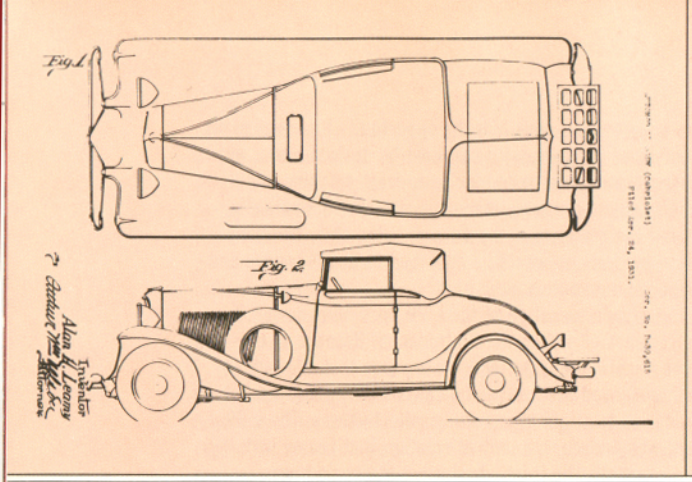
Some typed notes that Leamy prepared for an interview at the time of the L-29's introduction reflect the stylist's thoughts on automobile design. His philosophy transcended the traditional practice of making the body fit the chassis, as the following excerpt suggests. "Body designs have been influenced to a great extent by the horse drawn vehicle it replaced. Body designing was often an afterthought. The changes, from year to year, were most often the result of some change or improvement in the chassis itself. The engineering departments were usually responsible for making these changes and made them as well appearing as possible. If the result was pleasing to the public eye and especially to women, the sales value was immediately apparent. Time and again, we have seen a change in design in a certain car followed by public acceptance and this feature of design would soon be copied by other manufacturers.

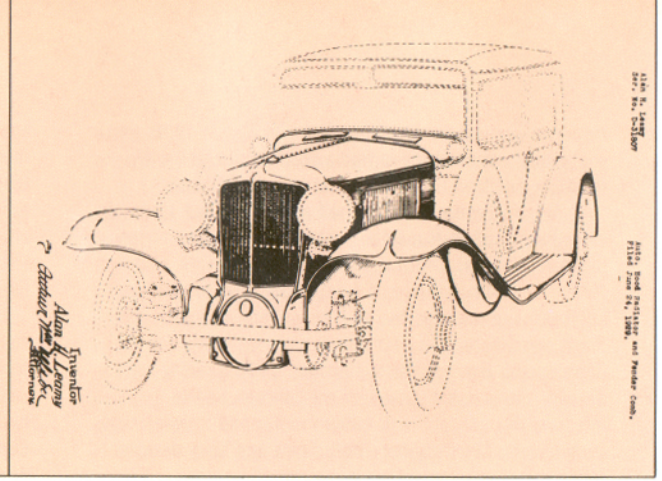
"Mr. E. L. Cord was one of the first executives to sense and foresee the sales possibilities of artistically designed



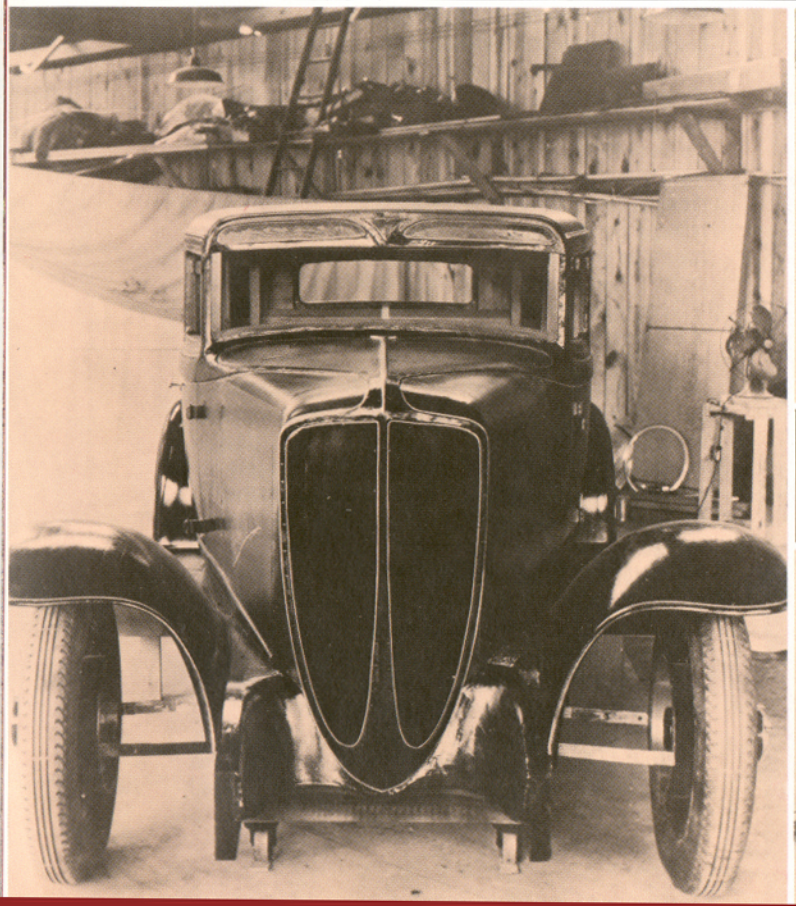


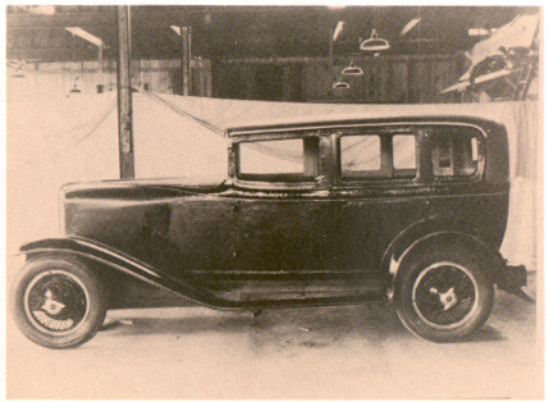






Above: two of Leamy's patent drawings, for the Auburn Cabriolet submitted on April 24th, 1931 (left) and for the front-drive L-29 Cord submitted on June 24th, 1929. In corresponding with the Employment Service of the Society of Automotive Engineers on September 28th, 1933, he summarized his accomplishments. "The complete exterior design of the Cord Front Drive was entirely mine. Following the Cord, I designed the 8-98 model, and subsequent models of the Auburn. . . . I have designed the building of quite a few Custom and Experimental models on Cord and Auburn chassis. Previous to my association with Auburn I was with the Marmon Motor Company, and designed their last series of large eights."





Three views of a wooden mockup produced from one of Leamy's designs by the Experimental Department of Auburn in about 1931. Design was never used in an actual car.

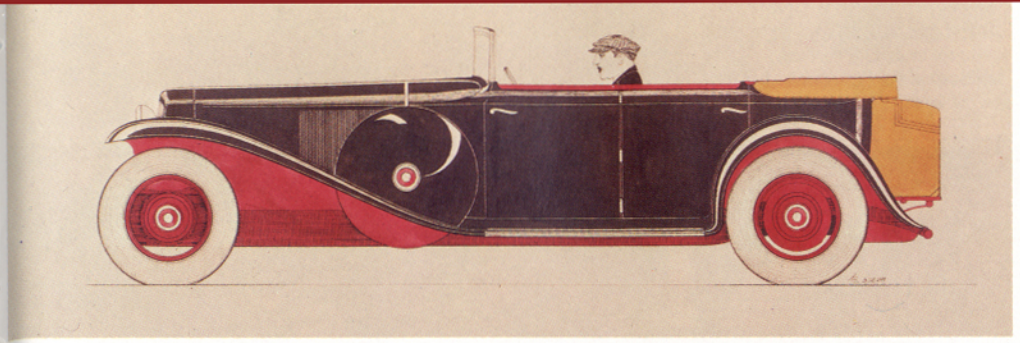
automobiles and instead of depending upon the engineering force for designing the body for the new Cord front drive, he created a special department upon whom the responsibility for the appearance of the car would depend."

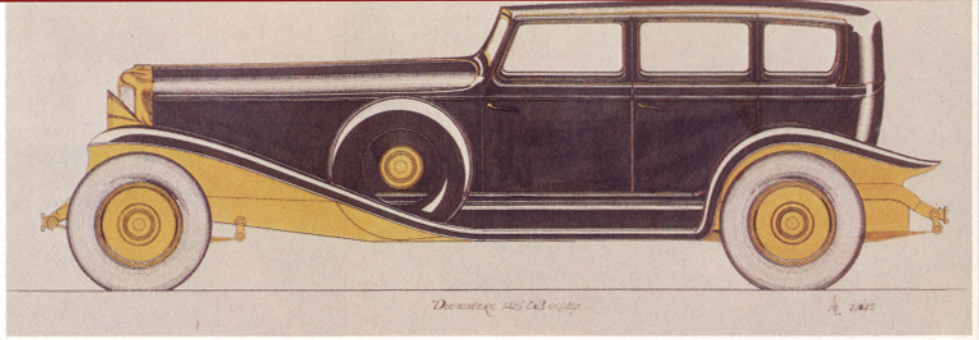
In his capacity as chief stylist, Leamy was also responsible for the Auburn automobile line. Recognition of the marque was increasing, basically as a result of E. L. Cord's successes with the straight eight engine and colorful paint schemes. Leamy's first assignment was to update the well-established Auburn sedan, giving it bigger doors and other features to increase passenger comfort. E. L. Cord's desire to see the effect of the changes on a full-sized car led to what was apparently Auburn's first project involving large scale clay models.

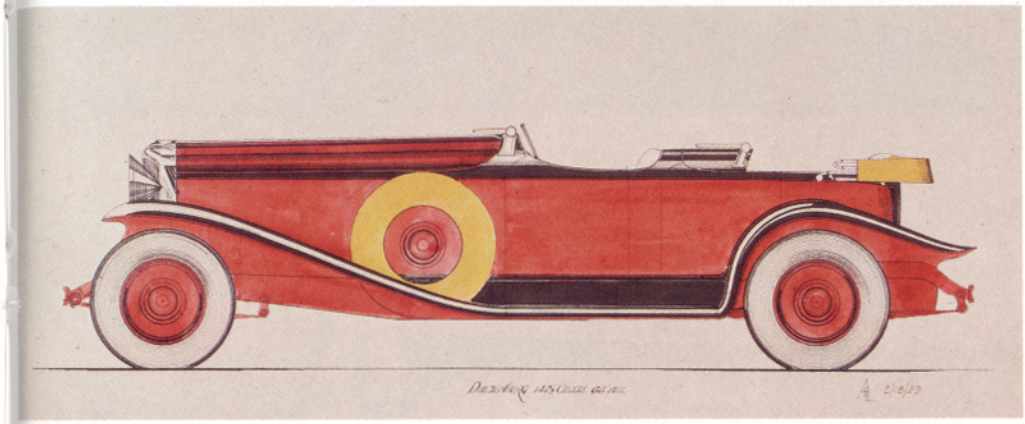
While it is extremely unlikely that Leamy had previous experience with clay modeling, draftsman A. E. Williams, who worked on the front wheel drive project, recalled that Leamy instructed him and a group of pattern makers in constructing a clay model 1929 Auburn sedan during the fall and winter of 1928. "The pattern makers built a 'dummy' body to the approximate shape of the Auburn sedan body. We'd plaster it with clay," Williams recounted, "and mold it from templates taken off the actual full-size body drawings that Leamy and Oswald would have done." Using paddles, trowels and sculpting tools, the model was shaped to the exact contours. "Al taught us the tricks of the trade. We made our tools out of heavy wire which was ground to fine cutting edges. Without his expertise, we wouldn't have gotten to first base." The model was completely detailed. Wheels were placed in position, glass was inserted into window recesses and it was painted and striped. "You would swear it was an actual car," observes Williams, referring to photographs taken at the time.

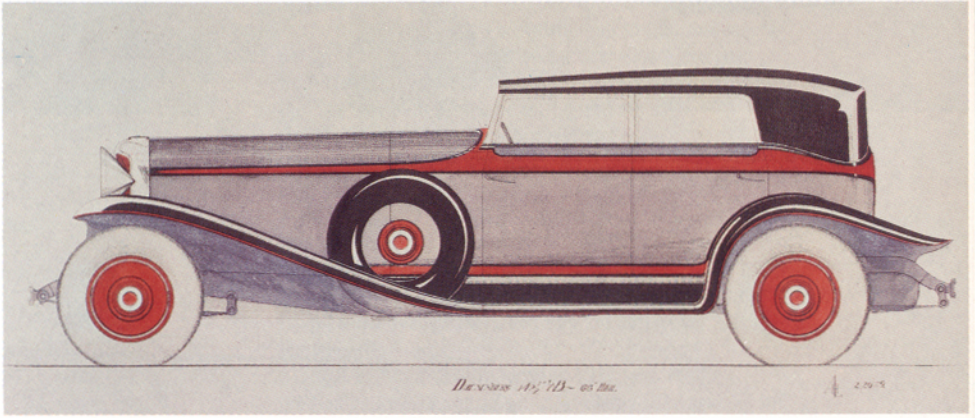
During this same period Leamy rendered a series of Duesenberg models. While it is not documented, there are strong indications that Al Leamy influenced the development of the famed Model J. Comparison of the Duesenberg to the L-29 reveals the Leamy line. Designer Strother MacMinn draws attention to the elements peculiar to Leamy's characteristic style. He questions whether there were any others present at that time who possessed the sensitivity to create those beautiful Duesenberg radiator shells which are "completely unique and probably the noblest things that ever happened on the classic American automotive scene."

MacMinn points out the use of a wide shoulder at the top of the radiator shell. The form gracefully tapers downward as it continues outward, suggesting a gently rounded heart. Through the use of this radiator design, Leamy created a unique identity, and an artistic focal point

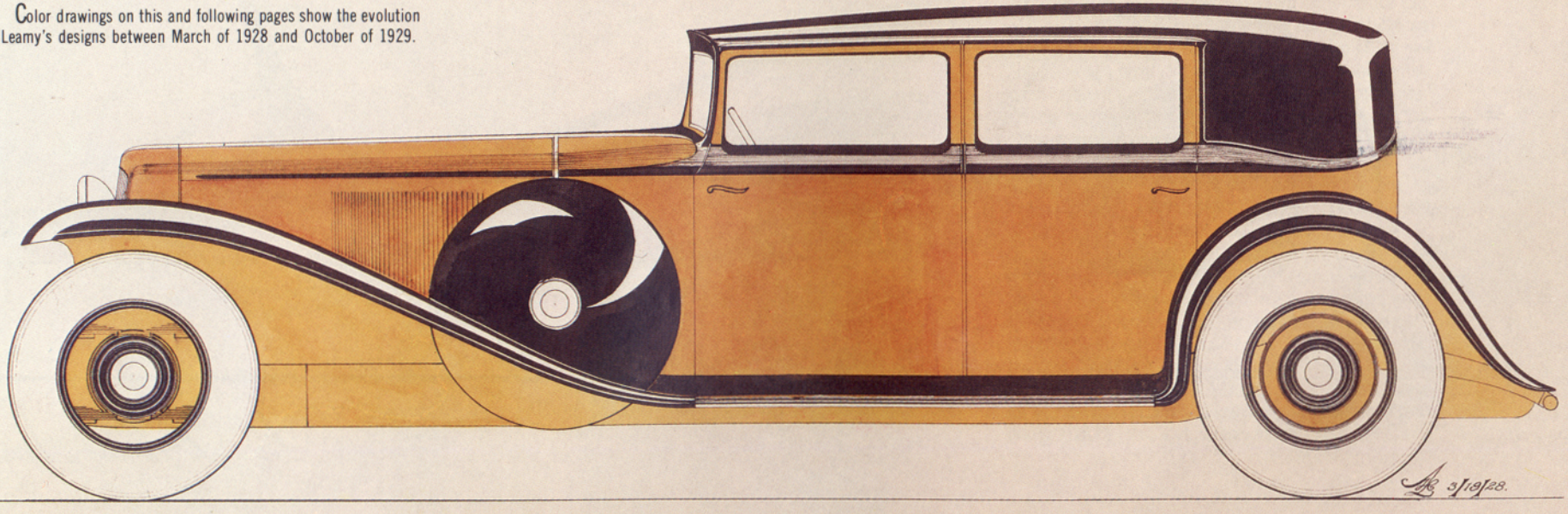


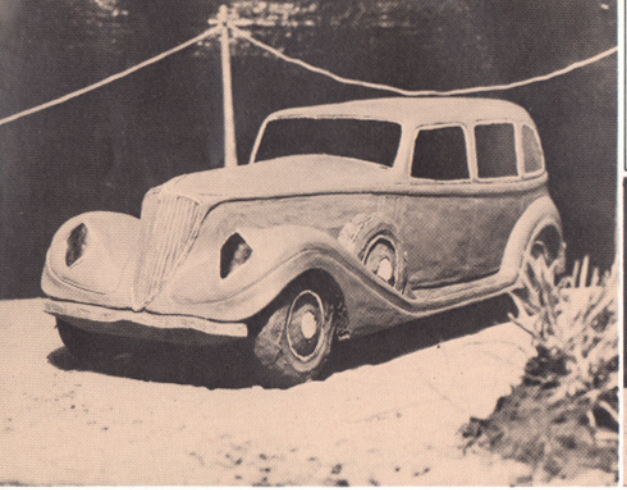


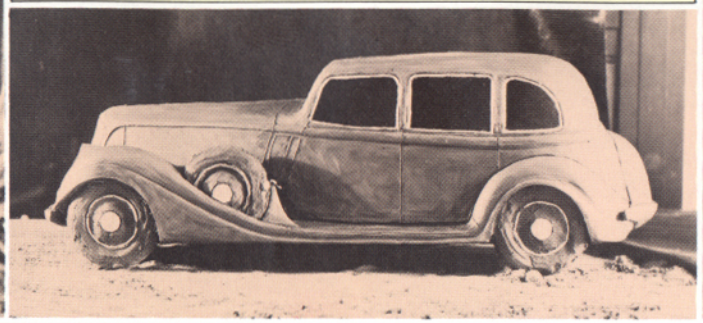




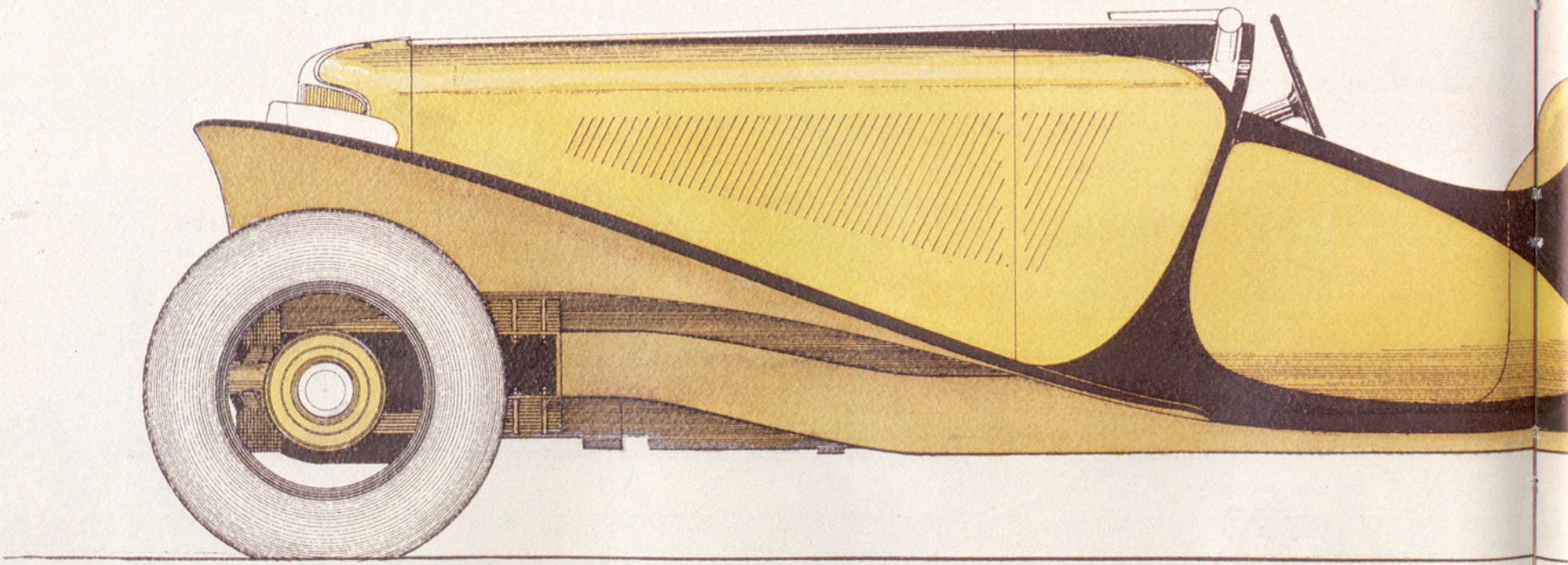
Color drawings on this and following pages show the evolution of Leamy's designs between March of 1928 and October of 1929.



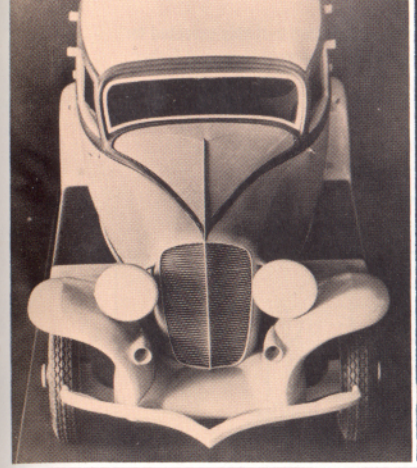


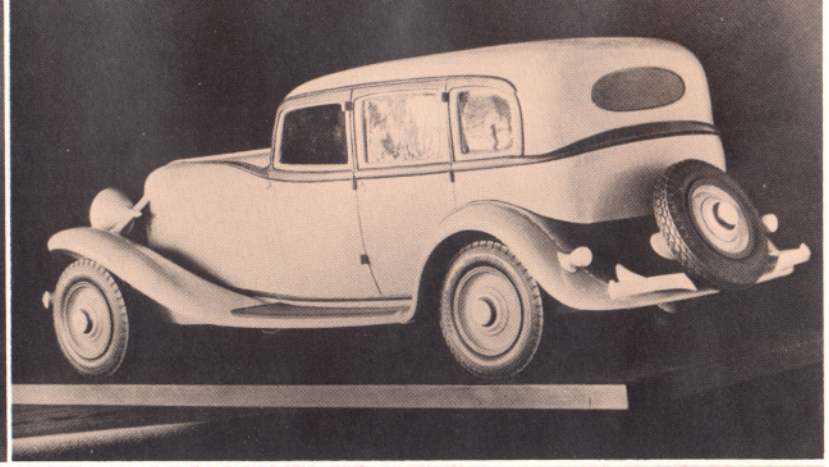


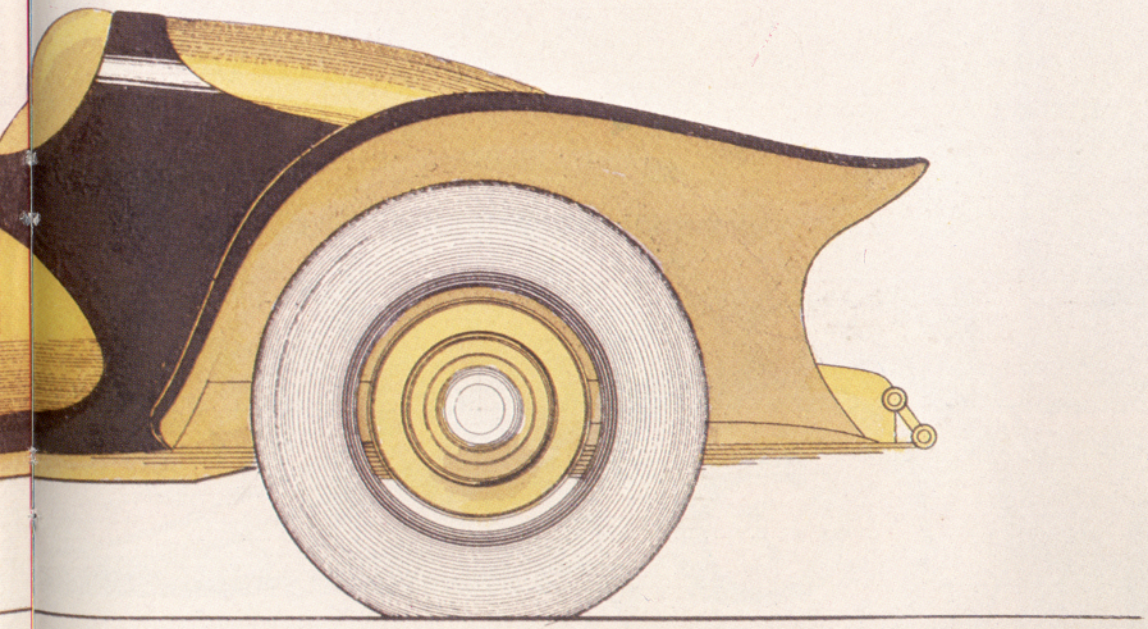
This page: a firm believer in life-size and scale-model clays, Leamy supervised the creation of these Experimental Department models for the 1934 Auburn. Opposite: views of a plaster scale model developed in the Experimental Department for a proposed 1934 Auburn that was not built.



Le Mans Speedster







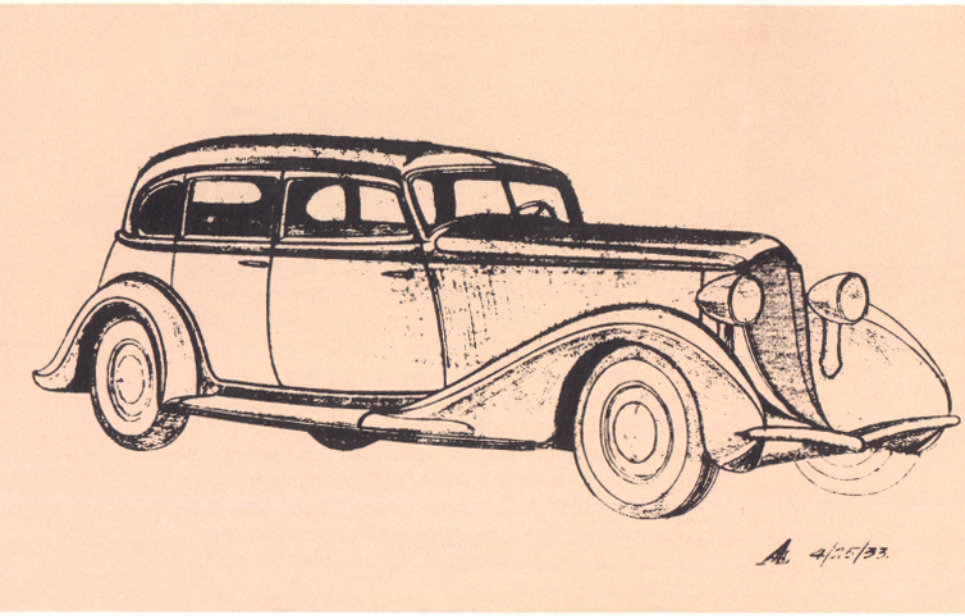
that blended with the entire body form, including the hood. Also illustrative of Leamy's technique is the interpretation of the clamshell fender. Beginning with a convex arch over the front wheel, the arch form is continued, almost endlessly, until finally reversing into the running board. MacMinn describes it as a "marvelous, long, leaping flair. Nobody did this quite like Leamy did." His work demonstrated a unification of form and proportion that had not yet been expressed in the mechanically oriented automotive field.

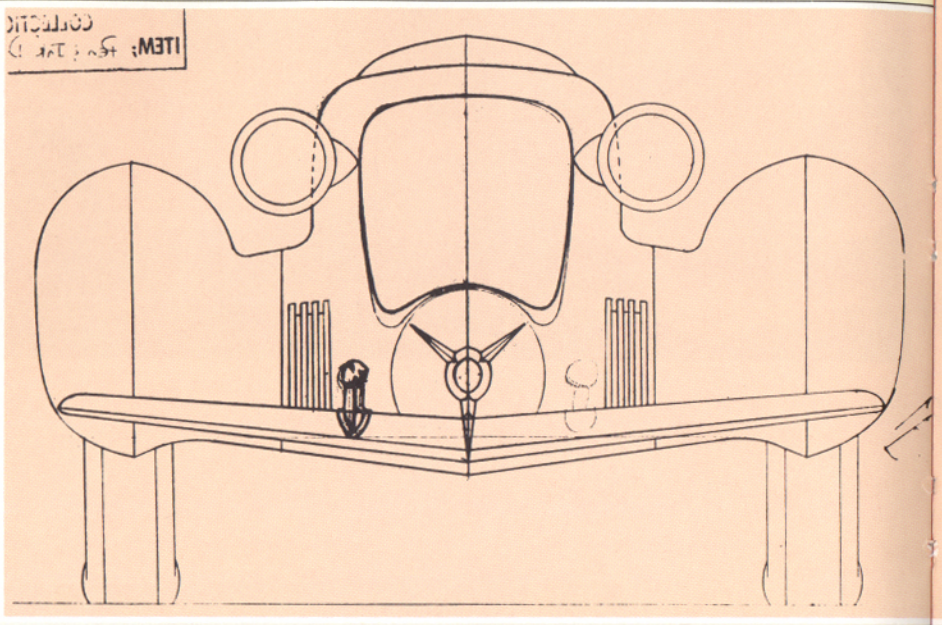
The question of Leamy's contribution to the Duesenberg design was also commented on by Duesenberg designer Herb Newport, who saw the resemblance to the L-29 and the fact that both cars were introduced almost simultaneously as evidence suggesting Leamy's involvement. Because the front wheel drive project was underway at the Duesenberg factory until August of 1928, when Leamy was present, it seems likely that Leamy's fresh ideas gained acceptance within the Model J program. Somewhat later, when designer Gordon Buehrig came to the Duesenberg program, he remarked that the radiator and fender line already established was too perfect for him to tamper with.

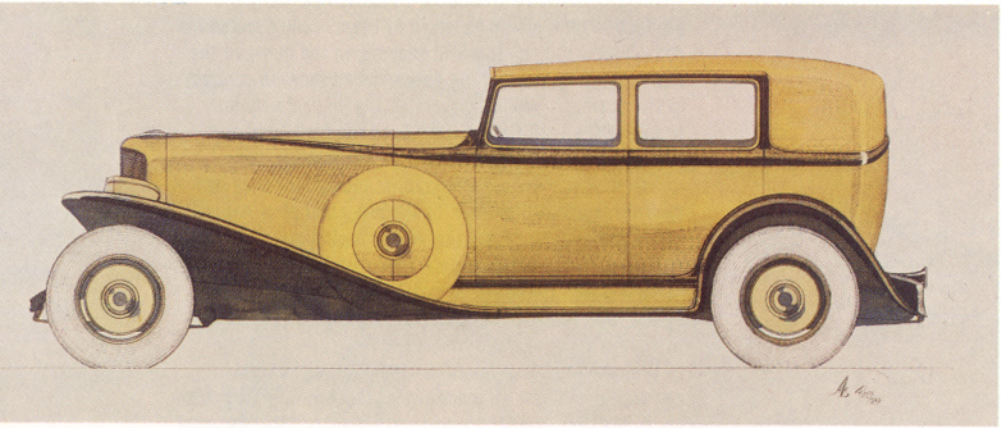
The 8-98 Auburn, introduced in 1931, was the first production line Auburn to which Al Leamy fully devoted his considerable talents. It would become, in the midst of the Depression, the best selling Auburn of all time. In contrast to the emphasis which exaggerated the distinctively low profile of the L-29 Cord, Leamy used the high body and frame of the Auburn chassis and engine to an equally dramatic effect. Auburn's reputation for performance had been extended at that time thanks to a number of national speed and endurance records. At the beginning of the new Auburn design program Leamy conferred frequently with those involved in the company's high speed performance testing, and he modified his proposals and designs on the basis of what he learned from them.

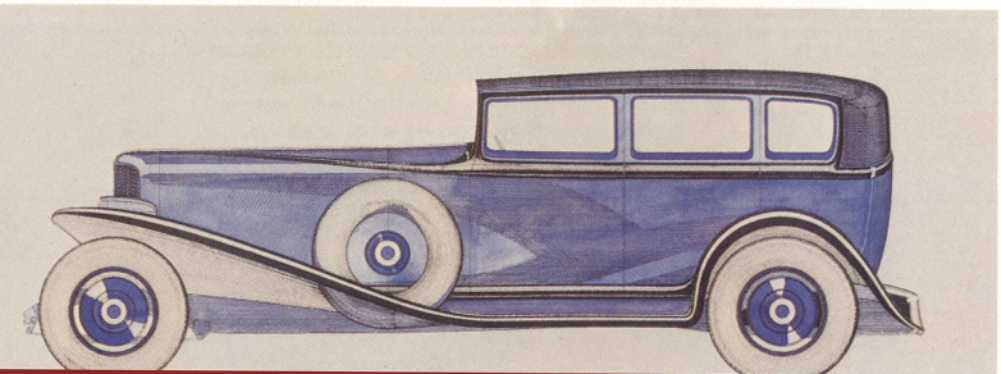
To dramatize the powerful Lycoming Straight Eight engine, Leamy's design made use of the naturally long, high hood. The car's overall appearance announced the presence of high performance. Focal point of this vertical design theme was another master presentation of individualism—the radiator shell. In keeping with the corporate image present in both Cord and Duesenberg, Leamy began with the high-shoulder appearance. In achieving a unique identity for the Auburn, MacMinn notes that Leamy's use of the center split was "the key to a fresh, modern look. The Auburn radiator design visually suggests a hole into which air would naturally flow." Capitalizing on this identifiable design feature, once again Leamy had hit the mark of a

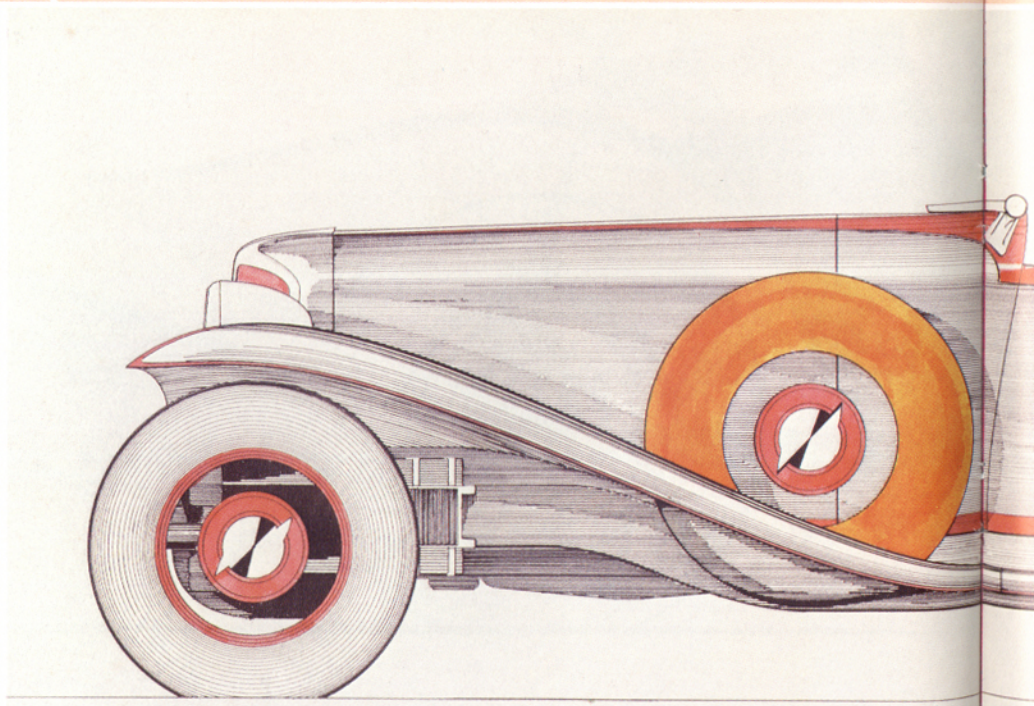
Three pencil drawings from the latter period of Leamy's career. Idea for Packard front-drive sedan done on April 25th, 1933, during the period when Leamy hoped to follow his mentor Cornelius Van Ranst to Packard. Packard president Alvan Macauley found his designs "too extreme." Center and right: undated views of a front-drive sedan probably executed for a prospective LaSalle or Cadillac shortly before he went to work at Fisher.

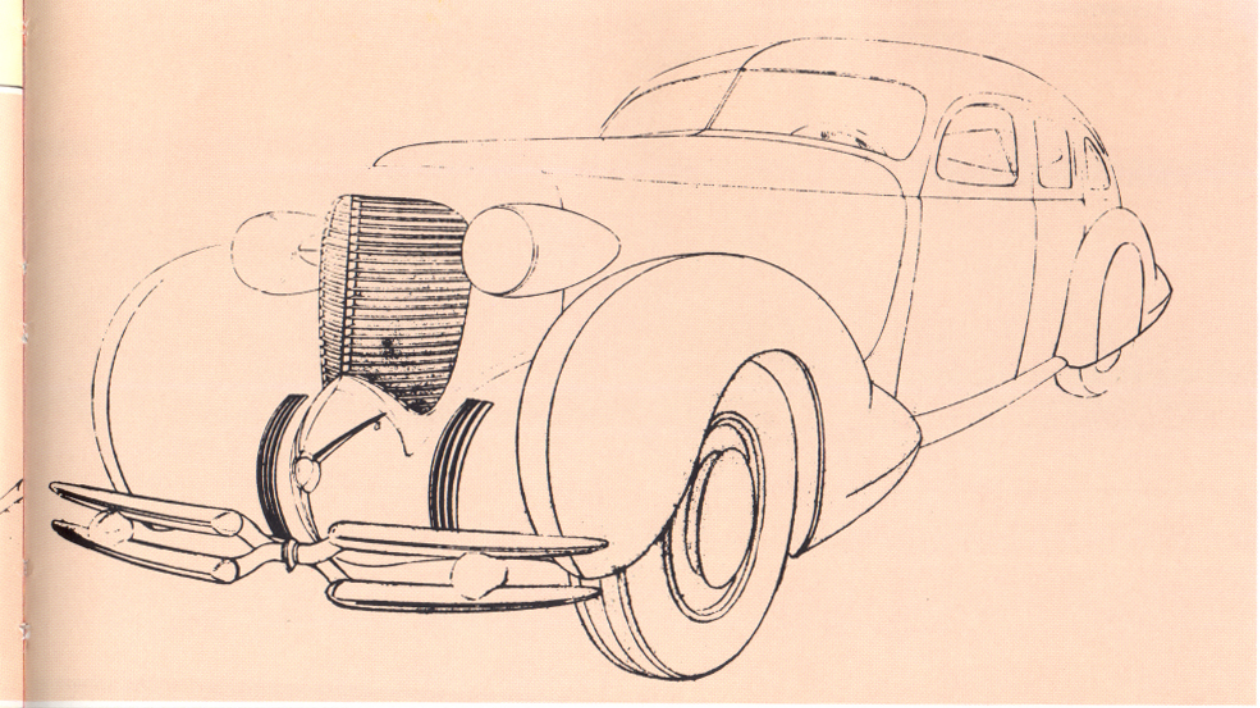


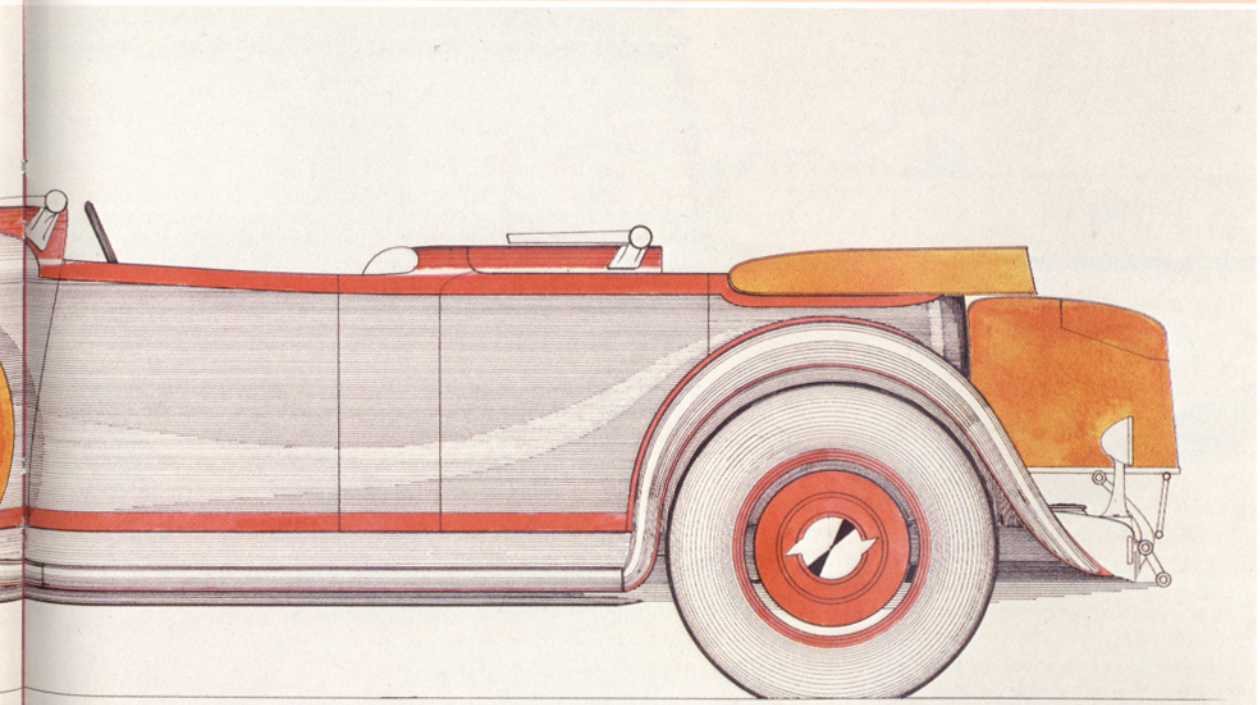












Cord Sport Phaeton

truly unique, yet totally natural form.

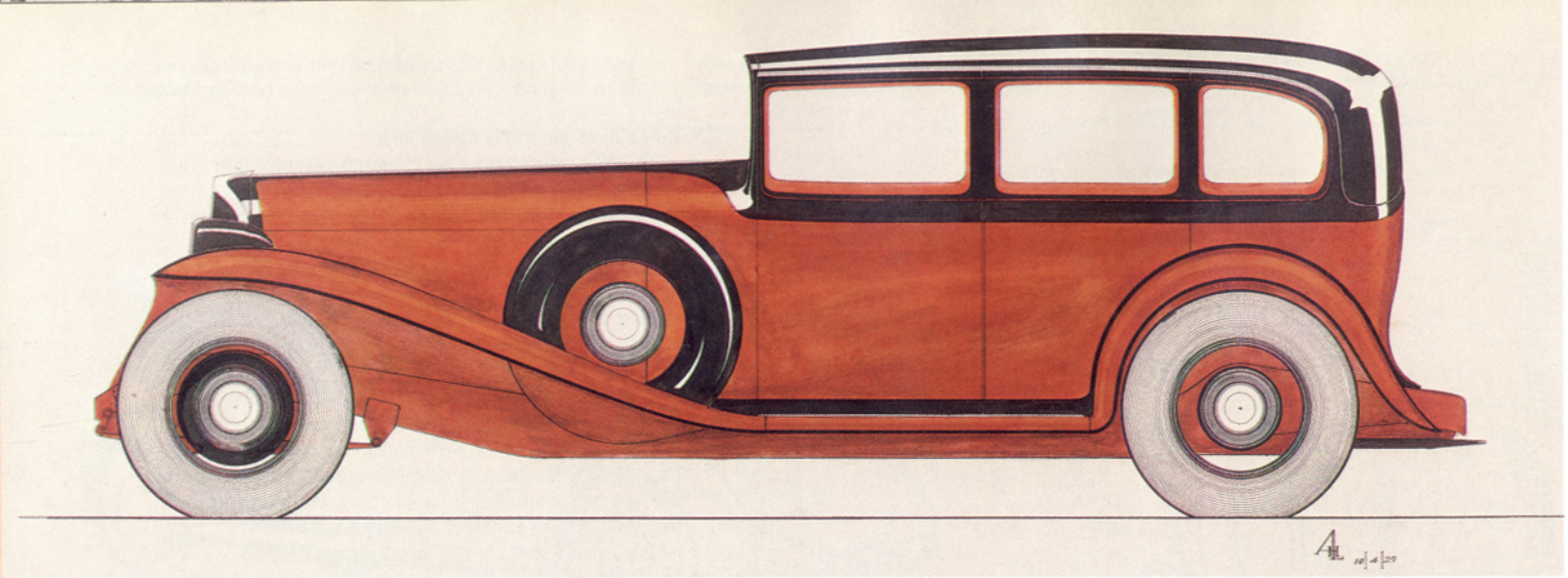
While the radiator and hood command attention, their importance in Leamy's styling scheme lies within the completeness of the automobile's design. Again, his concept of proportion distinguishes his work from other designs. The Auburn convertible sedan epitomizes the qualities inherent in this development of styling. Narrow windows increase the impression of overall length. The flair of the fender connotes speed. There is the characteristic attention to detail.

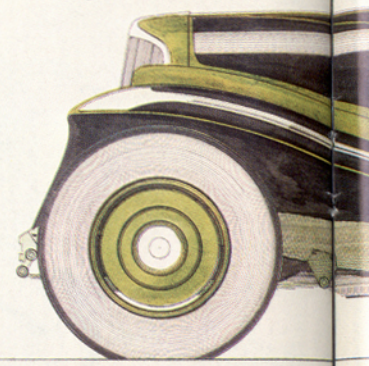
In the fall of 1931, Auburn added a speedster to the 8-98 series. The development of this automobile gave Leamy the opportunity to exhibit even more of his convictions about design. The raked windshield and boattail epitomize the sensation of speed, and the boattail speedster became the most enduring symbol of Auburn's popularity.

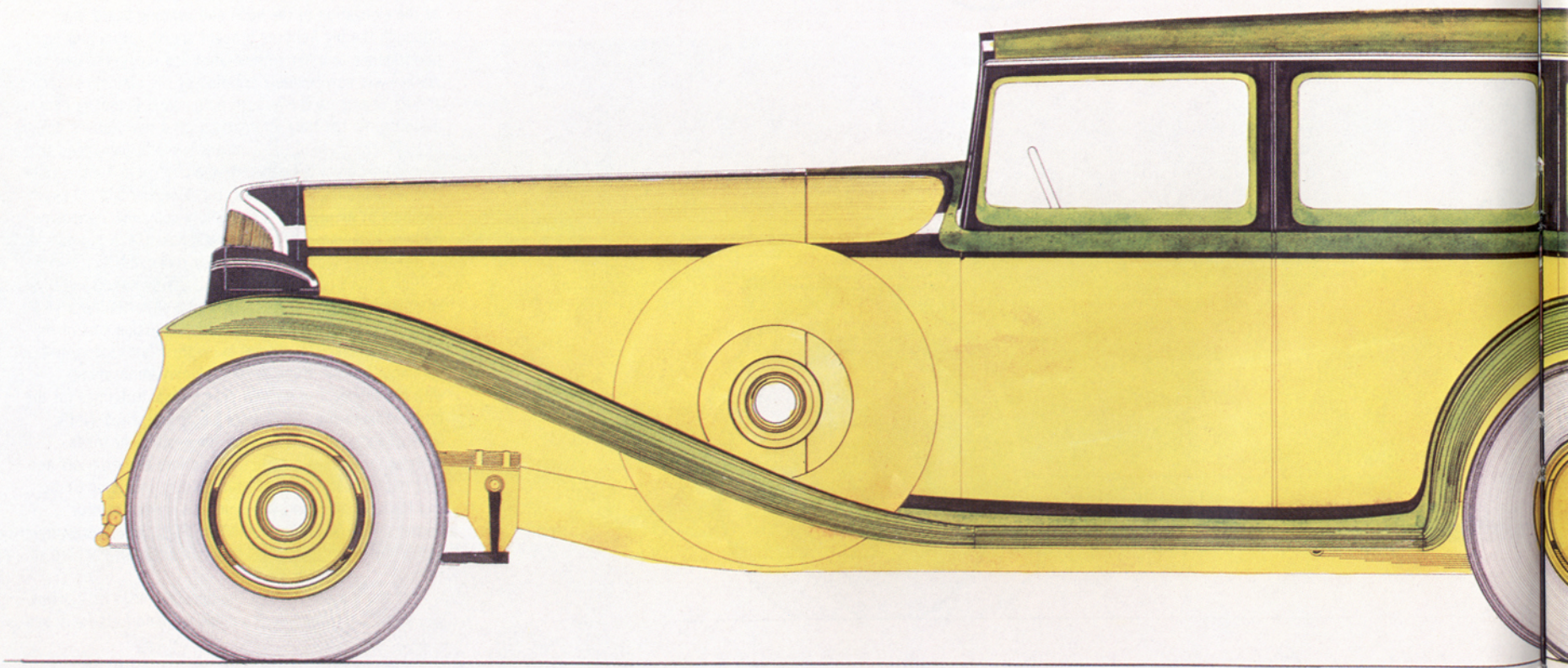
Only minor styling changes were made as the 8-98 became the 8-100 for 1932. However, in a move to position Auburn in the forefront of the affordable high performance, luxury car field, the company introduced the V-12. With essentially the same styling features as the eight cylinder Auburns, the twelves gained an extra eight inches in length by the elongation of the hood and running board area. Although the big Auburns brought stylish luxury and high performance to a more moderate price range, the new car market was now severely crippled by the nation's economy, and its effects on the Auburn Automobile Company became disabling. As the time approached for a new Auburn design in 1934, the state of the company's health demanded an austere engineering budget. As the decline in Auburn sales reached alarmingly low levels, the company laid off large numbers of employees. A subsidiary company, Limousine Body of Kalamazoo, Michigan, was closed, and production at the Auburn factories was greatly reduced.

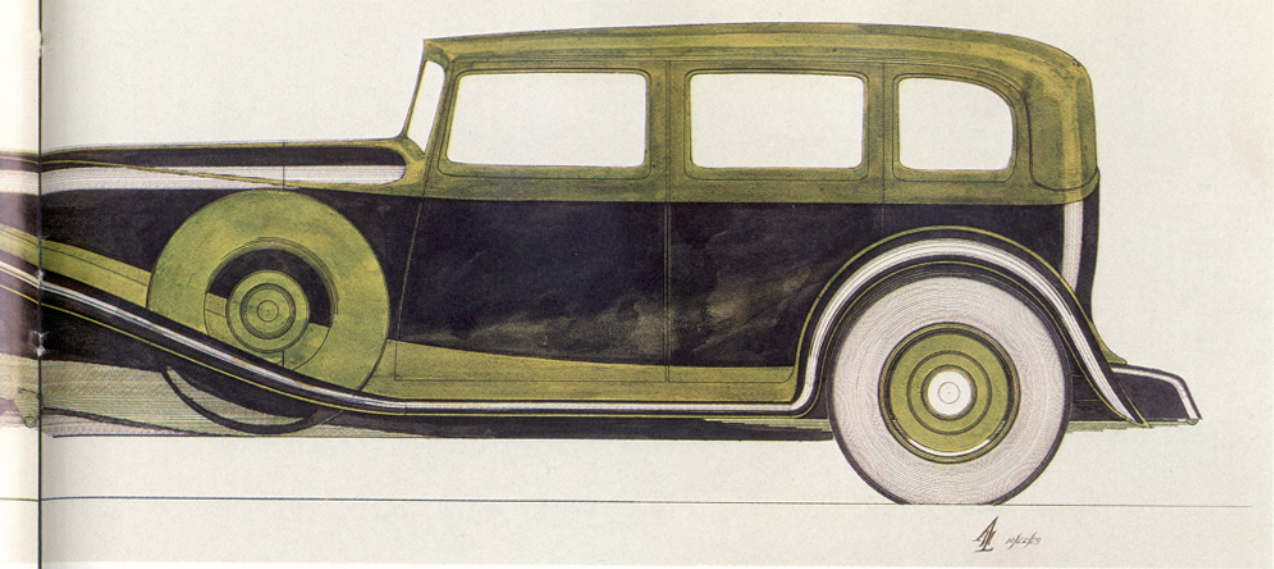
During his first years with Cord, Leamy had enjoyed stimulating professional contacts, the opportunity to develop some of the most exciting production cars of the period, and even the chance to create a few custom-bodied automobiles. But in the present gloomy atmosphere, with the prospect of no new design responsibilities for the foreseeable future, Alan Leamy became restless. In the hope of securing a more satisfying position he made sketches of various automotive interiors and exteriors and sent inquiries to several manufacturers, including Graham and Packard, the company which his former mentor Cornelius Van Ranst had joined in 1929. Drawings forming part of Leamy's front wheel drive proposal for Packard still survive.

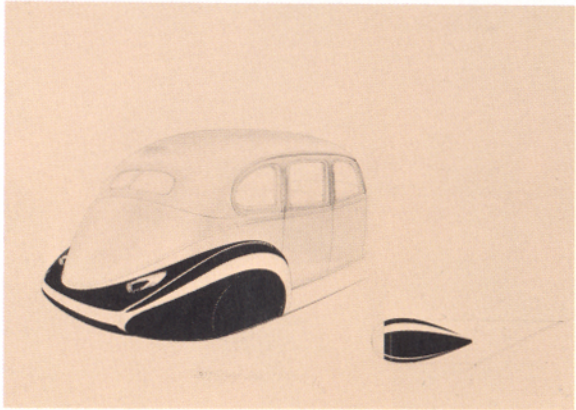
For a time it looked as if the new challenge that Leamy was seeking might come through his friend Alfred Ney and











Near the end of his career Al Leamy worked on these drawings as part of a design proposal prepared for Graham.

the Bendix Company. Ney had left France and his position as an engineer with Delage in the hope of obtaining broader experience in the United States. After a period of employment at Pratt-Whitney he joined Packard's aviation department. Following that he took an engineering job at Bragg Kliesrath.

Then the Bendix Company acquired Kliesrath and Mr. Kliesrath became vice president of Bendix, whose overt business was the production of auto parts. Soon afterwards Alfred Ney learned that it was president Vincent Bendix's secret ambition to build a complete automobile that would bear his own name. Bendix set up a special division, the Steel Wheel Corporation, to create the car; only a few of his intimates knew the real nature of the company.

Ney, believing that the new car should be a front wheel drive vehicle, enlisted the assistance of Leamy, whose design expertise he had come to admire. In the small shop that Bendix provided, Ney created the car's monocoque framework, an innovative structure which had its origins in the aviation industry. Made of a precursor of bonded "Duramold" plywood, the entire frame weighed no more than 1600 pounds. Ney also created a four wheel, independent suspension system for the car. According to the design proposal, it was designed to carry five passengers, three in front and two in the rear.

Albert Ney recalls that when the chassis was completed Vincent Bendix's glee was almost childlike; as company executives and the car's creators watched, the president broke a bottle of champagne against the framework. Bendix was so eager that the car bearing his name go forth into the world that he insisted that one of the standard, heavy, wood and metal bodies of the day be attached to its frame immediately. But the delicate engine and suspension could not sustain so great a weight, and the Bendix's debut in Europe was not a triumphal progress, but a series of humiliating breakdowns in England, France and Italy.

Leamy never had the chance to create the projected body; at about this time General Motors purchased Bendix and Vincent Bendix had to turn his back on his namesake. Only the Ney-Bendix prototype was produced; it has survived to the present day.

Meanwhile, Auburn's future grew increasingly dark and Leamy continued to search for suitable new opportunities. In the summer of 1934 he found the chance he had been seeking and left Auburn to work as a designer at the Fisher Body Company. Then, a year later, Leamy was promoted to chief stylist of the LaSalle Division of General Motors. Mrs. Leamy recalls the enormous satisfaction that her husband derived during this period from Harley Earl's admiration for his work.

Leamy's friend Al Ney remembers planning a visit to Detroit to celebrate his promotion. But just before he was to leave he received a telegram containing the tragic news that Alan had suddenly died as the result of accidental septicemia from an injection medically administered.

The automotive career of Alan H. Leamy had passed in just eight years. Although only thirty-three at the time of his death, he had become instrumental in developing new trends in automobile design. His personal life has become overshadowed by the magnitude of his accomplishments—a case of performance taking precedence over presence. ✠