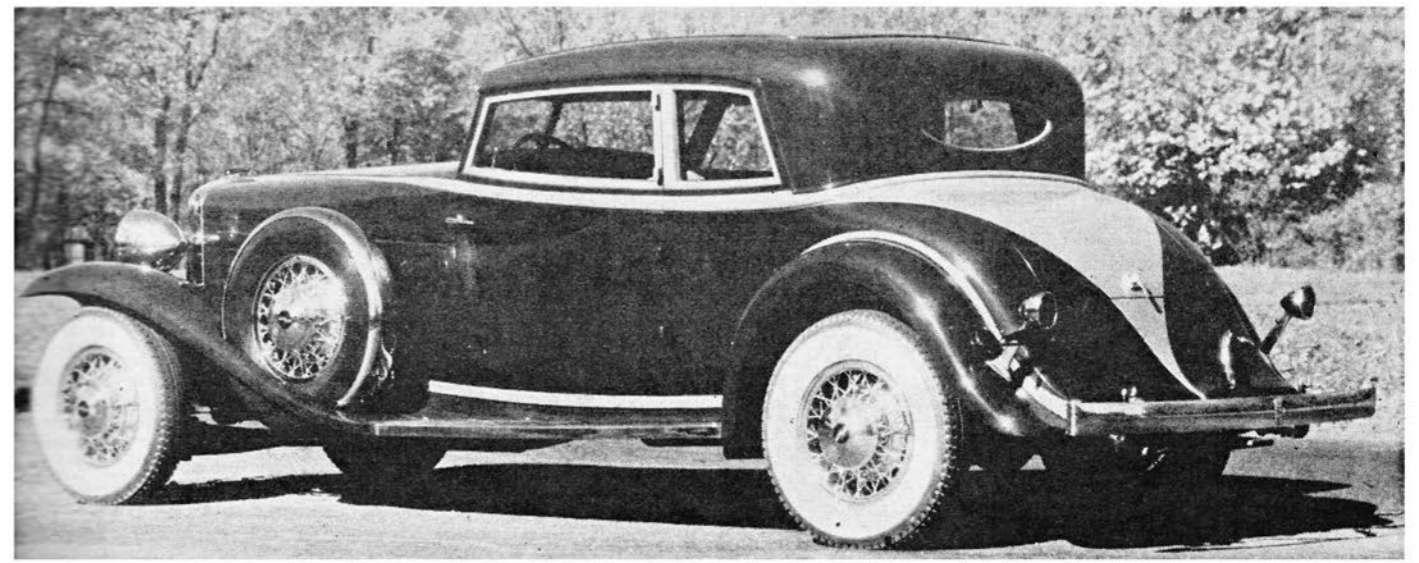
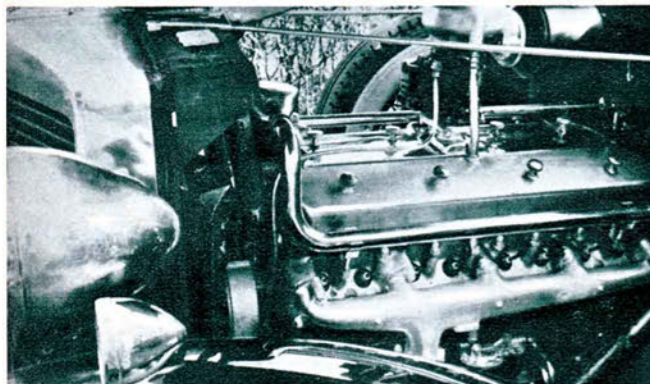


A classic among classics, this 1931 Marmon V-16 coupe is a one-of-a-kind styled by Walter Teague with body by Dietrich

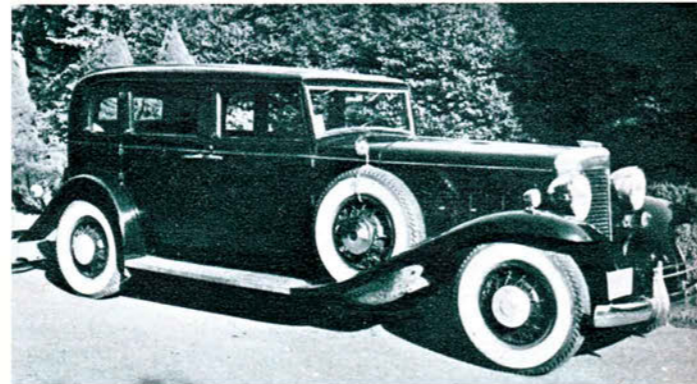


Forerunner of club coupe differed from other Marmon 16s in its more rounded, Auburn-like contours, speedster-like paint

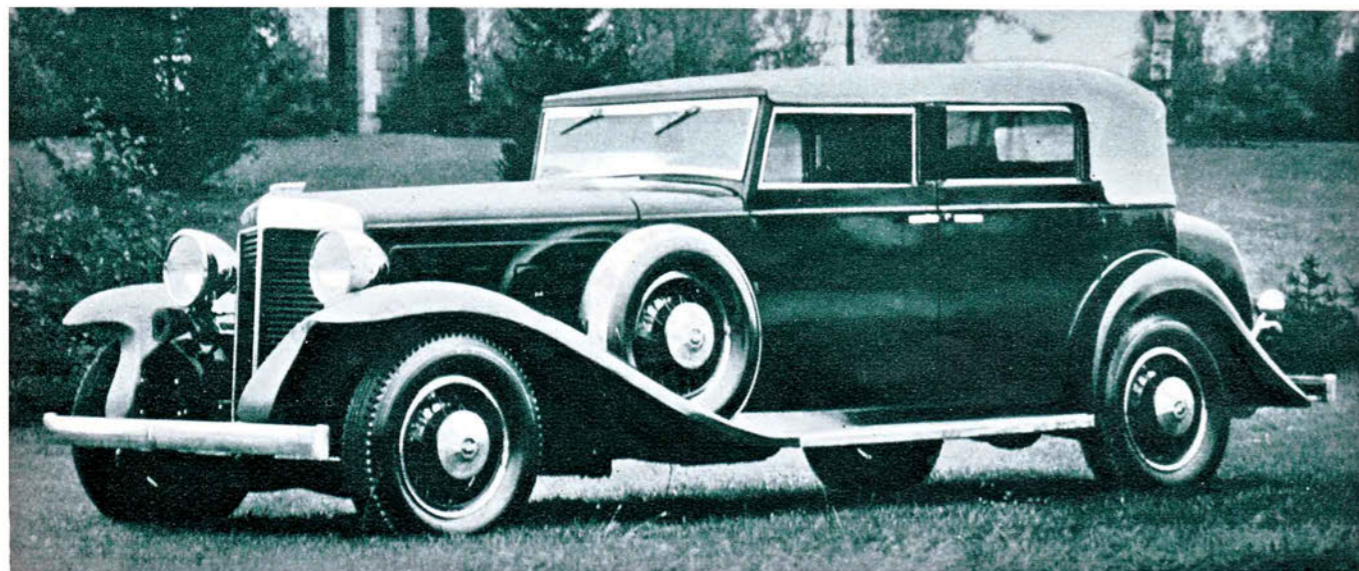
# The MARMON MASTERPIECE



The all-aluminum V-16 Marmon engine developed 200 hp at 3400 rpm, had 491 cubic inches and 6 to 1 compression



The 1931 Marmon V-16 was crowning glory of outstanding line built from 1902 to 1933 by Nordyke & Marmon Co.



The Marmon was easily capable of busting 100 mph on the highway. Its engine had "wet" cylinder liners made of steel tubing

When older classic car enthusiasts talk of cars of mechanical perfection, they'll inevitably recall this one **by Robert J. Gottlieb**

**M**ENTION A MARMON to a Marmon enthusiast and his eyes glisten, his pulse beats faster and his blood (if he has any) races madly through his veins. Immediately he thinks of mechanical perfection, outstanding design and, of course, 16 cylinders. It is true that the Marmon isn't with us today as a contemporary product. The few that remain are coveted holdovers from another era, yet each car tells a chapter in the fabulous history of man and machine that culminated with the 16-cylinder masterpiece always associated with the name.

The Marmon story ends with the 16—but whoever heard of a story beginning with the end—especially a story where the end really started with the beginning. Confusing? It really isn't.

To begin with, the marque is noted as much for the ability and integrity of the man behind the car as for the car itself. Howard Marmon, an engineer's engineer, always built substantial cars into which he put his best efforts. He pioneered the use of aluminum in bodies and engines and developed automotive engineering to such a high degree that the Society of Automotive Engineers awarded him a special commendation.

Most manufacturers of early-day automobiles started in business around the turn of the century. A few remain in business today, but the majority have entered and dropped from the field in the short span of 50-odd years. The company that built Marmons was in existence when an automobile was merely a dream and far from a reality. It was formed in 1851 (at a time when the United States of America were far from united) as a machine shop.

Howard Marmon was born in 1876 and his father practically reared him in the factory. He obtained a well-rounded practical knowledge of machinery and, as a natural born engineer, he constantly improved machines and devised better methods for making machinery. In his early 20s he read extensively of the efforts of Gottlieb Daimler, Otto, and other early inventors interested in internal combustion engines and decided that as an experiment he, too, would build an automobile. His experimental car was so successful that, with minor changes, it was built as a production unit.

Marmon's first car was started in 1898—completed in 1901—and driven for the first time under its own power in 1902. The company announced publicly in 1903 that it would enter into the manufacture of commercial vehicles (6 were sold that year) and the Automobile Manufacturers Association lists the car as a new model in 1903. It was not actually produced as a production model, however, until 1904. As primitive as early cars were, Marmon was just as interested in building a prototype that would ride well as he was interested in having a car that would go at all. He therefore designed what can be best called a double 3-point suspension system. The body was mounted on one frame, the engine on another frame, and the 2 frames were connected to each other at 3 pivotal points. Early Marmon ads boasted of this arrangement in addition to the fact that the company was formed in 1851. Ads published in 1905 read as follows:

*"Luxurious cast aluminum body on one frame, entire powerplant on an-*

*other frame, each frame operating independently of the other, each being suspended on 3 pivotal points. No matter which wheels are raised, no matter which frame is tilted, the powerplant, straight and rigid driving shaft and rear axle are always in perfect alignment, free from twisting and binding strains. This means perfect power transmission and less wear on all parts, tires included. Unique and perfect lubrication."*

In actual operation, one frame would follow the contour of the road while the other would remain level. The idea was excellent and worked satisfactorily on primitive cars which traveled at low speeds. In fact, it was so satisfactory that the idea was continued on production cars built through 1908. But, by 1908 cars were capable of higher speeds and at such speeds the double-point suspension system caused them to handle like a locomotive on a quarter-mile dirt track.

Commencing with the 1st car and throughout the entire span of automotive production the company concentrated on the use of aluminum to eliminate weight. From the start the bodies were of aluminum and from and after 1916 the engines were aluminum.

The first production model based on the experimental car was called Model B. Aside from the dual-frame suspension system it was similar to other early automobiles. It had 4 cylinders (the first cars had 2 cylinders) and a 90-inch wheelbase. The engine was of interest because it was a V4 and had full pressure lubrication, although it was not the first V4 in the field. By 1906 the Model B ac-

## THE MARMON MASTERPIECE continued



**Dependability and performance of stock Marmons benefited from the company's all-out support of racing. Cars like this resulted in superbly roadable big 75s, V-16s**

quired certain improvements in addition to a healthy \$2500 price. It featured a double side entrance, a planetary transmission, automatic forced lubrication through a hollow crankshaft and 32 x 4-inch clinchers. The 4-cylinder, 4 x 4, 20-horsepower air-cooled engine was retained and overall weight was slightly more than 2000 pounds.

By 1907 numerous models were manufactured. They were automobiles designed to attract purchasers in the medium- and high-priced brackets. The cheaper car (\$2500) known as the C-7, developed 24 horsepower and was designed for 4 passengers; the medium-price car known as Model F (5 passengers—\$3000) developed 35 horsepower and the prestige car, an air-cooled V8, developed 60 horsepower. The V8 was designed to sell at \$5000, but \$5000 was much too much money in 1907. It is rumored that there were no orders for the car and it was never manufactured commercially. Nevertheless, the achievement of a V8 in 1907 stands unsurpassed in automotive history. Actual work on the V8 commenced in 1905!

Though he was a wonderful engineer and designer, Howard Marmon made his first mistake in 1907. Though the cheaper cars sold in sufficient numbers to show a profit, he decided, with full knowledge that the \$5000 V8 died at birth, to concentrate on prestige cars and to discontinue the lower-priced models.

By 1908 the company had built a 4-cylinder luxury car featuring speed, light weight, simplicity and dependability. The biggest change was a switch from air- to water-cooled engines. At a time when other cars could be purchased new for \$500 Marmon asked \$2400 for his cheapest. The cars sold, but they didn't sell well and like other contemporary manufacturers the race tracks of the country were looked to for prestige. Modified factory Marmons were extremely successful and the highest possible prestige was obtained in 1911 when Ray Harroun won the first 500-mile Indianapolis race in a 6-cylinder Marmon in 6 hours, 42 minutes and 8 seconds. The race job was called the Wasp because of its unusual tail design. It introduced to the American

motoring public the first use of a rear view mirror.

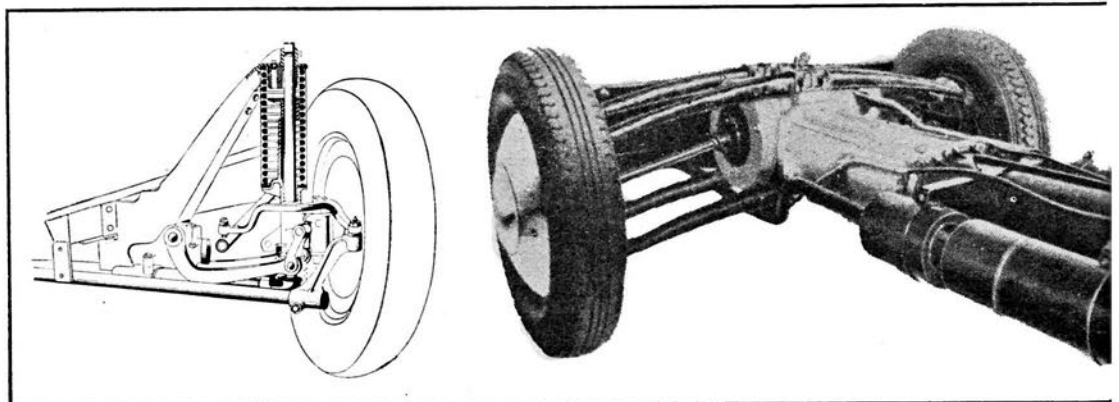
The Harroun racer was based on a Marmon Model 32 (tho the production 32 only had 4 cylinders) which was eventually replaced by the Model 34, an expensive car, well-designed, but again priced in the luxury class.

The 1916 Model 34 had 6 cylinders, developed 74 horsepower, was mounted on a 136-inch wheelbase, weighed 3530 pounds, and sold for \$2700. Tho other manufacturers were featuring 8s and even a 12 (Packard), Marmon stayed with the 6-cylinder engine. By 1925 the factory advertised 10 different cars; here are sample prices:

Sedan .....	\$3295
Coupe .....	\$3450
Limousine .....	\$3900
Sedan limousine (7 passengers)	\$3975

From 1916 until 1930 Marmon automobiles were dull and uninteresting from a classic standpoint. The Model 34, first introduced in 1916, was the basis for many model changes and finally became the Model 75 in 1927. The most that can be said for the cars is that over 12,000 were sold. They performed well due to their light weight and they were average in appearance. It is hard to understand how 12,000 were sold because the 34 model was competing with prestige automobiles and most manufacturers of luxury cars of this period used 8-cylinder engines. Because all the 6-cylinder models were so similar, a description of one is sufficient. The Model 75 was an overhead valve 6-cylinder engine that developed 84 hp at 2700 rpm. The body was mounted on a 136-inch wheelbase (considered fairly large) and weight was 4250 pounds. If an 8-cylinder car had been manufactured during this period the financial structure of the company would have undoubtedly been much stronger. It might have been able to weather the impending financial storm brought on by the Depression.

In 1927 Marmon got on the 8-cylinder bandwagon and produced its first 8-cylinder car. In 1928 the 6 was discontinued and a frantic attempt was made to ac-



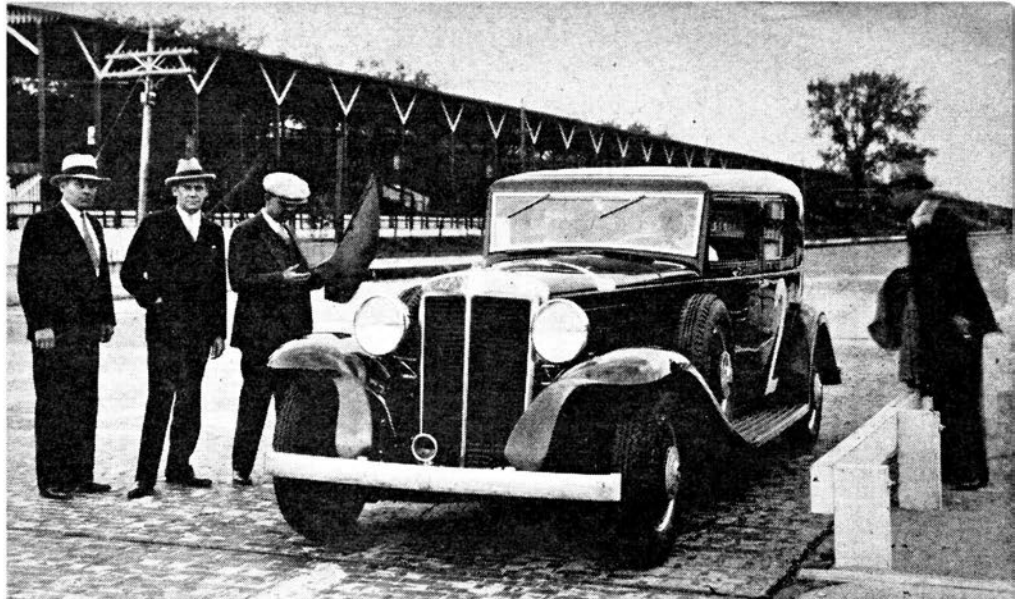
**The revolutionary V-12 had this odd slipper-type front suspension. Frame's 8½-inch tubular spine led to 4 rear transverse springs to prevent roll, give more fender clearance, a wide seat for '33**

quire dollars by building cars designed to sell in the medium- and low-priced fields. In 1929 the 8-cylinder cars ranged in price from \$995 to \$3995, cheapest of which was called the Roosevelt. It was strictly a low-price car bearing little resemblance to the larger models. It utilized what might be termed a standard L-head, long-stroke engine, and while they didn't sell well, the company was not losing money on them. Numerous models were built, but even the luxury cars were unspectacular and have little appeal to the classic car collector today.

Marmon was never happy with the 8-cylinder models. Even before production started he dreamed of building a 16-cylinder engine. Records show that his engineering department was hard at work on a 16-cylinder engine as early as 1926. Marmon knew of the impending horsepower race involving all luxury car manufacturers and he also knew that Cadillac would beat him to the market with its V-16. He decided that if he couldn't be first he would be best and would produce an engine developing more horsepower than the engines of his competitors. The horsepower race of the early Thirties (for production models) was won by Marmon with 200. Cadillac and Pierce-Arrow stopped at 185, Packard attained 175, Auburn 160, and Lincoln 150 horsepower. The Marmon was surpassed only by the 265 horsepower developed by the Duesenberg brothers but by no stretch of the imagination can the Duesenberg be called a production car.

Marmon's V-16 only lasted for 3 years (1931, 1932, and 1933; production ceased in '32) but it left a lasting impression on the automotive world, so much so that it is one of the most admired classics in existence. While it is universally known for its powerplant, the running gear and bodies were constructed of the finest materials and with great craftsmanship. Even small details were so perfectly executed that the car is up near the top among all cars built in America in construction.

There were 850 16-cylinder cars built, yet it is estimated that only 60 are in existence today. The great bulk of the bodies



*This typical V-16 close-coupled sedan with fabric roof set new records at Indianapolis. Tireless all-aluminum engine loafed at 3400 rpm even when putting out 110 hp*

were styled by Walter Dorwin Teague and built by Le Baron. Of the total, about 100 had custom or semi-custom bodies. These command the highest prices in the classic car field. Mounted on a 145-inch wheelbase, the heavy cars were extremely smooth in operation, fast in acceleration, and good for 105 miles per hour. Inherent beauty was assured thru simplicity of design to such a degree that the cars are prime examples of functional beauty today. It may be surprising, but the basic simplicity hindered sales in the early Thirties. Prospective purchasers wanted an even longer hood and longer sweeping fenders. Had the car been more spectacular and less simple in appearance, it might be in existence today. Luxury car purchasers of the early Thirties wanted more proof of their financial status than a V-16 marking on the body.

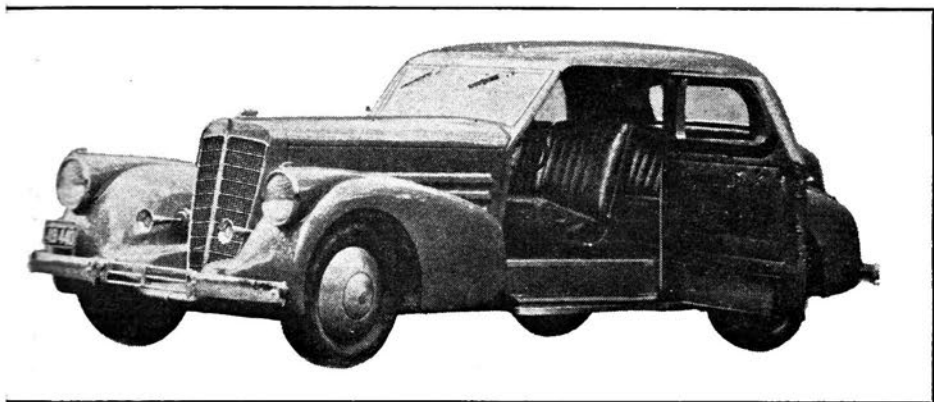
Another drawback was sales price. Marmon consistently charged more for the car than Pierce-Arrow and Packard charged for the 12s. Yet, the Marmon was slightly cheaper than the Cadillac V-16. Marmon prices varied with the changing economic conditions during the years of manufacture. In 1931 the convertible coupe sold for \$5300; this price jumped to \$5850 in 1932. By 1933 the price was \$4975.

The 16-cylinder engine developed 200 horsepower at 3400 rpm. It had overhead valves and a 6 to 1 compression ratio, highest in the industry at the time. It displaced 491 cubic inches and was built in a 45-degree V. Total weight was 930 pounds and outside appearance was a masterpiece in aluminum. The overhead valves had valve seat inserts of aluminum and bronze, and air-cooled guides. The wet cylinder liners were sealed effectively to the aluminum block with rubber liners. This brought the designer an award for engineering achievement from the Society of Automotive Engineers.

In 1931 the Marmon V-16 established numerous speed records, one of which was the spectacular Indianapolis run of 1834 miles in 24 hours. That record stood until the end of 1953 when a '54 Chrysler finally broke it.

Howard Marmon saw the handwriting on the wall as early as 1930. When sales were disappointing in 1931 he knew that another model featuring different characteristics would have to be marketed if the marque was to remain in existence. It is easy to stand in judgment today and say that Marmon should have built an economical 4- or 6-cylinder automobile. In any event he decided on a V-12 for the simple reason that V-12s were out-selling his own V-16 and the V-16 built by Cadillac. He went back to the drawing boards and with the assistance of his staff developed an automobile that even at this date could be called revolutionary. Only one car was ever built but it, too, stands as a monument to the engineering genius of its creator.

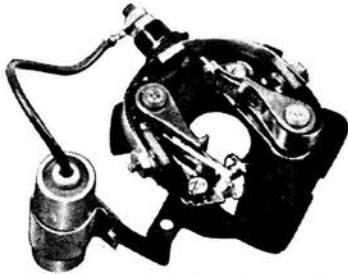
The corporation did not have sufficient funds with which to build the prototype of the proposed new line. Marmon drew funds from his personal account to finance construction. Even so it was necessary to cut corners wherever possible. With insufficient funds to build the new engine, a V-16 engine was used, cut in two, the middle 4 cylinders eliminated, and the 2 6-cylinder (Continued on page 50)



*But the V-12 was never to see the salesroom. The aluminum-bodied car, whose engine was a V-16 sawed in two, showed up only as this luxury 2-door sedan prototype*

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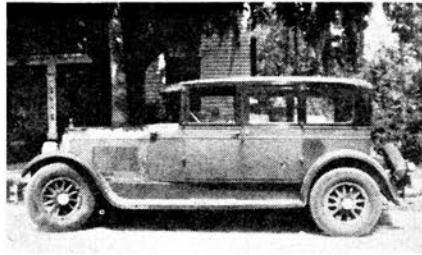
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Continued from page 29.

## The Marmon Masterpiece



### One of the powerful but staid 75s

halves were then neatly welded back together again! Because a V-16 was used to build the engine, the V-12 had a 45-degree bank. Theoretically, the 45-degree angle is wrong for a 12-cylinder firing order, yet the engine developed 151 hp at 3700 rpm and was almost as smooth as the V-16.

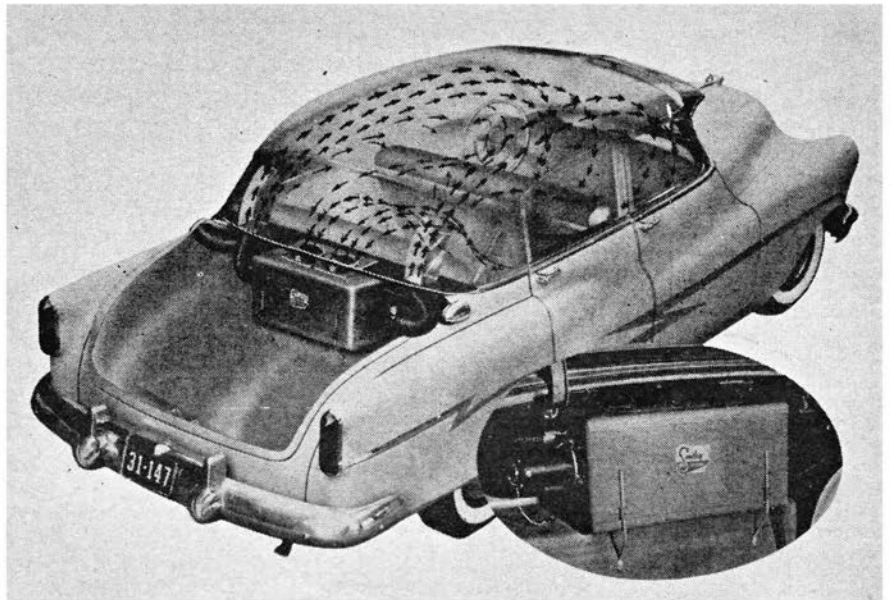
Marmon's basic idea was to introduce a radically different automobile, and his idea, at least, was successful. The car did not have a standard frame; instead, a steel tube was used as a backbone, similar to the frames used today by many foreign car manufacturers. Front and rear suspension was also unique. Rear end suspension was similar to the de Dion and front suspension consisted of a sleeve which slid up and down a guide post sus-

pending on a coil spring. Aided by the swing axle suspension in the rear, the car handled very well considering its wheelbase of 134 inches and overall weight of 4600 pounds.

The V-12 would cruise all day at 80 or 90 miles per hour, and the radical body featured Pierce-Arrow-type headlights, square fenders similar to the 1937 and 1938 Oldsmobile, and a roof line similar to the design used on contemporary British luxury cars. It also featured other mechanical innovations from radiator to tail lights.

The company that manufactured the Marmon masterpieces went into receivership in 1932 and emerged as the Marmon-Herrington Co., builders of trucks, buses, and automotive parts. The company is still in existence, the single fabulous V-12 is still in existence, and a few V-16s can still be found.

An important chapter in automotive history, however, is ended. In retrospect the industry owes much to Howard Marmon. It should be grateful for his contributions to metallurgy, design, and construction. As an individual, Marmon was concerned with light weight, performance, horsepower, and design. Beneath the aura of activity surrounding him he was very much a human being, for he cherished and kept his makeshift V-12 until his death in 1943. —Robert J. Gottlieb



**A**DUAL PURPOSE is claimed for this air conditioning unit, which is made to fit any make car, new or old. Called the Smiley Air Conditioner, the unit is designed to remove the impurities suspended in the air in your car, in addition to drawing in fresh washed and cooled air from the outside. It changes the air 3½ times every minute. The main unit, which weighs 48 pounds, fits snugly in the forward area of the trunk, leaving a good percentage of the usable luggage space

intact. Outside air intake is through chrome scoops located in the rear quarter body panels. Twin ducts feed the washed air thru outlets above the rear seat. Upkeep of the unit is at a minimum, with only water added as needed. Installation costs in the neighborhood of \$250, depending on make of car. If you're interested in getting rid of the discomforts of polluted air (see page 62 for more information on this subject), one of these units may be for you.