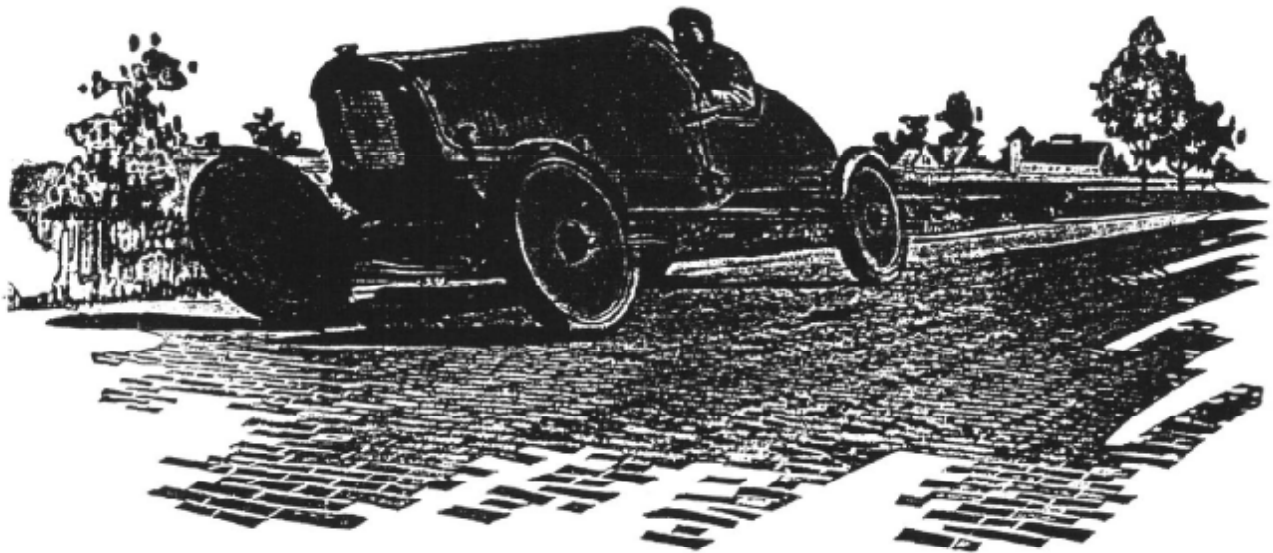


What dreams are made of . . .

— *There is* —
Real **CLASS**
— *to the* —
1921 “PACOS”

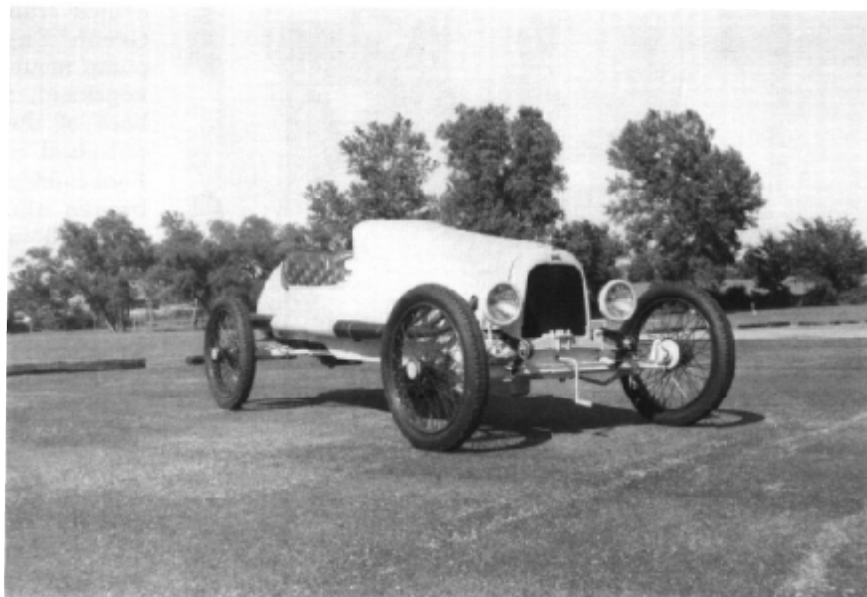
FITS ANY FORD CHASSIS



The Long Hard Road to Speedsterdom

The Story of a PACO-Bodied Speedster Restoration

By Larry A. Sigworth
Bartlesville, Oklahoma



Larry Sigworth's immaculately restored PACO-bodied speedster.

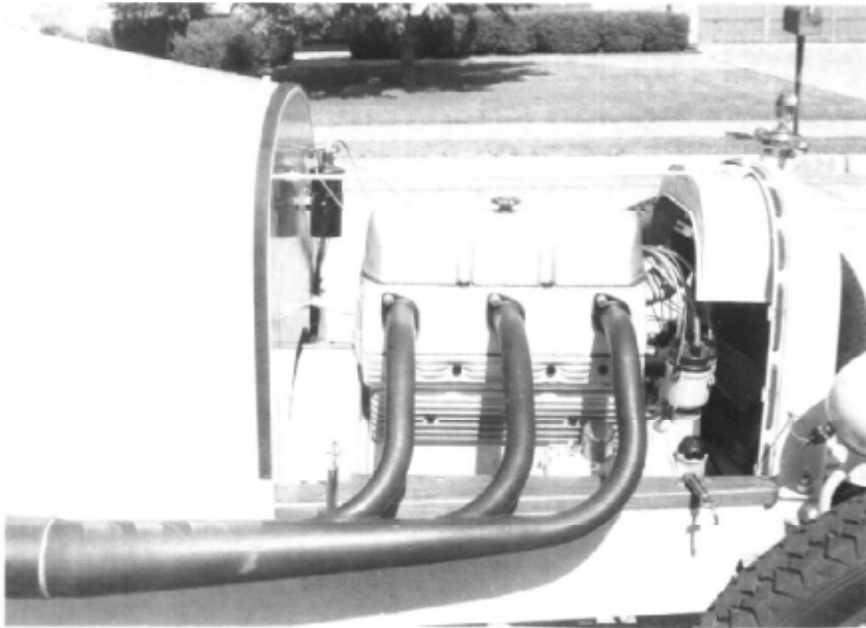
The ad on the bulletin board said "Model T Speedster for Sale. I knew a little about Model Ts, but had never heard of a speedster. Since the Model T had a top speed of about 35 miles per hour, I couldn't imagine how anyone could call it a speedster. I was very interested in antique cars, but didn't like Model Ts because they were so slow. The price of \$500 was much more than I could afford, but I was still very interested in this "speedster.

The year was 1970, and I was in the Navy, stationed in Washington, DC. I called the number listed in the ad, just to find out what a "speedster" was, but never did make contact with the owner. However, about two weeks later, I was browsing in a bookstore and found two books published by Dan Post: *The Fast Ford Handbook* and *The Model T in Speed and Sport*. I began looking through one of the books, and was totally amazed! A Model T had lapped the Indianapolis Speedway at over 85 miles per hour in 1923! Of course, I bought both books and spent many hours digesting all the informa-

tion they contained. After all this reading I decided I had to have a "Fast Ford" with all the goodies.

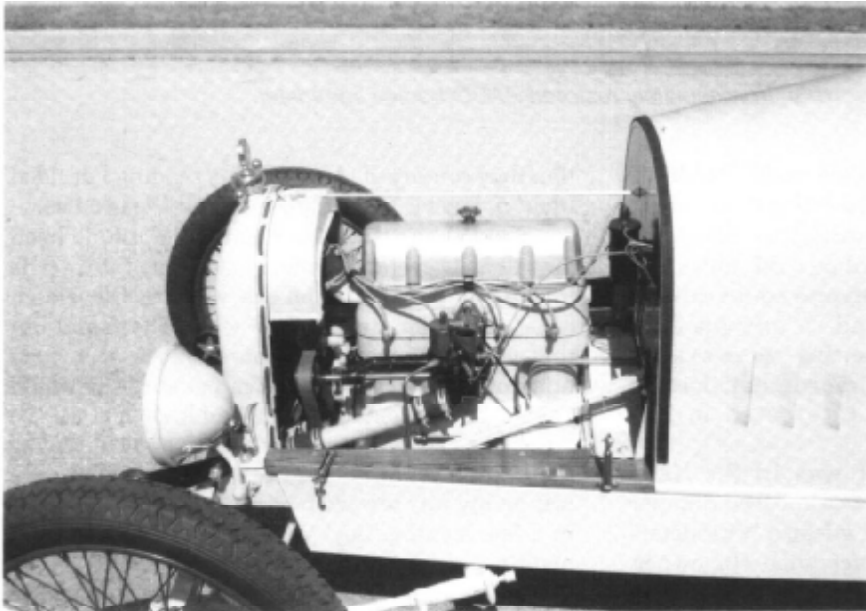
Several months later I learned of a Rajo head for sale in Cleveland, Ohio. I loaded my future wife in my sports car and off we went to Cleveland. (The expression on her face when she found out that we had driven eight hours to look at a rusty hunk of iron was priceless. I'm not sure she would have ever married me if she had known of all the speedster "adventures" she would endure during the next 20 years.) I bought the head and figured I was on my way toward having a running speedster in a few months. Boy! Was I naive. Those several months actually turned out to be 20 years!

About a year later we were married and moved to Omaha, Nebraska. I soon joined the Centennial T Club of Omaha (MTFCA). During the next year, club members helped me collect enough parts for a 1926 chassis; however, I still didn't have an engine or a speedster body. I saw an ad in a national magazine about an estate auction in Lincoln, Nebraska. The ad stated that a "partially complete



Above: The engine is equipped with a Frontenac head, Bosch front plate distributor, and PACO outside exhaust header.

Below: The engine is also equipped with a 1-1/2 inch Zenith side draft carburetor and a water pump. Note that the body is set back 6 inches from its stock location and that the hood overlaps the cowl by 7-1/2 inches.



speedster chassis and boattail body was to sold at a doctor s estate auction. I went to the auction and outbid everyone else for this rusty heap of metal listed as a "speedster.

What I bought consisted of a frame with a front lowering bracket, a front axle assembly, split

front radius rods and mounting brackets, and a rear spring with the shackle eyes turned up. A 1921 engine with a large hole in the block below number two cylinder was mounted in the frame. However, the engine had a drilled crankshaft, and a Green Engineering oil pump mounted inside the hogshead, driven off the back of the camshaft. A polished and lightened Ford connecting rod with a broken aluminite piston was still mounted to the crankshaft. The rest of the engine, as well as the transmission and rear end, were gone.

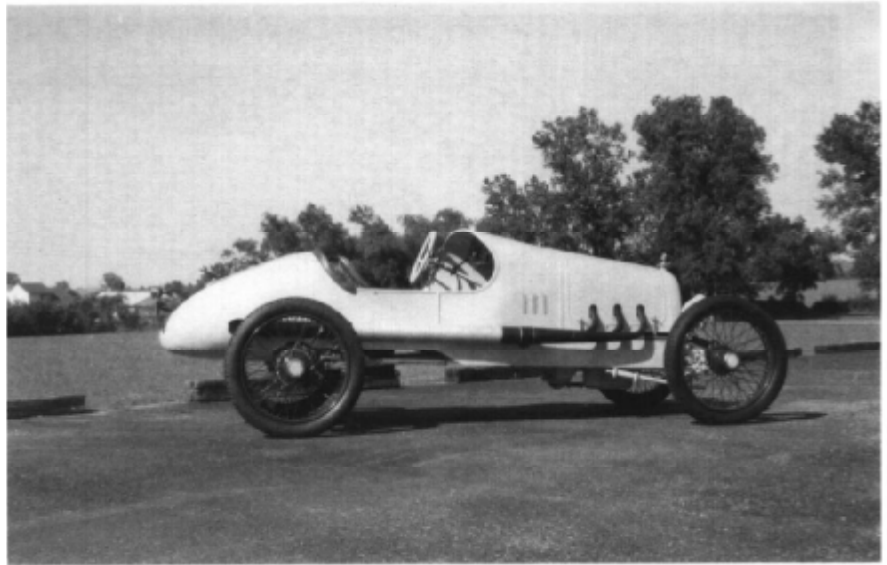
The body was very rusty and shot full of bullet holes in several places. The radiator shell and hood were missing, but the splash shields which mount along the sides of the body and hide the frame were there. Also missing were the windshield and top, however, holes in the body indicated that a windshield, top and side curtains had once been installed. I had no idea what brand of body it was, but I knew it had been built during the Model T era.

Since the car had a 1921 engine, it is likely that it was built sometime during the early to mid-twenties. Therefore, I decided to restore the car as it would have looked in 1924 or 1925, and use only parts which were available either before or during this

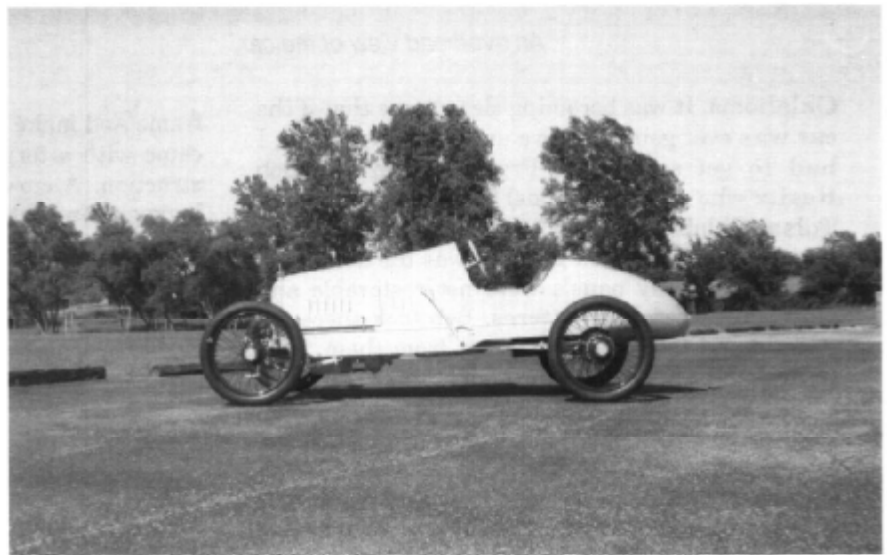
time period. I carefully researched every part on the car and believe it is correct for this time period.

By 1987 my dream speedster was about 50% restored. Since 1970 it had been moved from Omaha to Illinois, then to Texas, and finally to

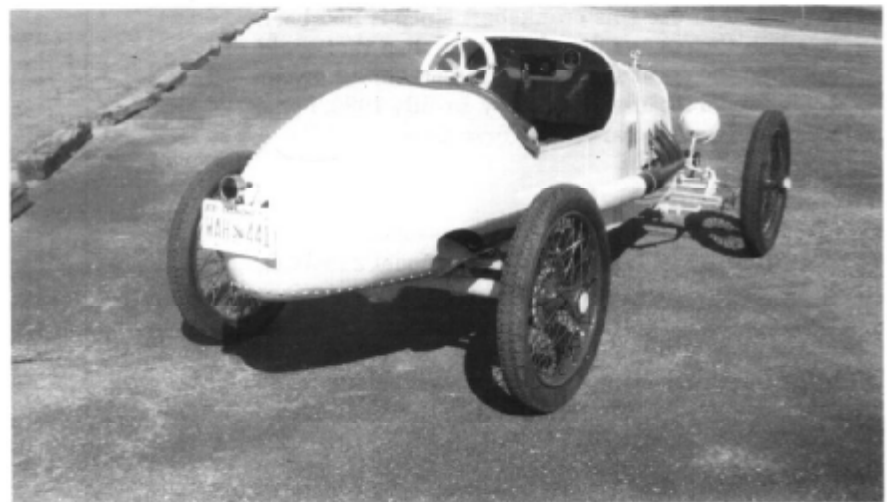
Note how the cowl is cut away on the passenger side to aid entry into the body.

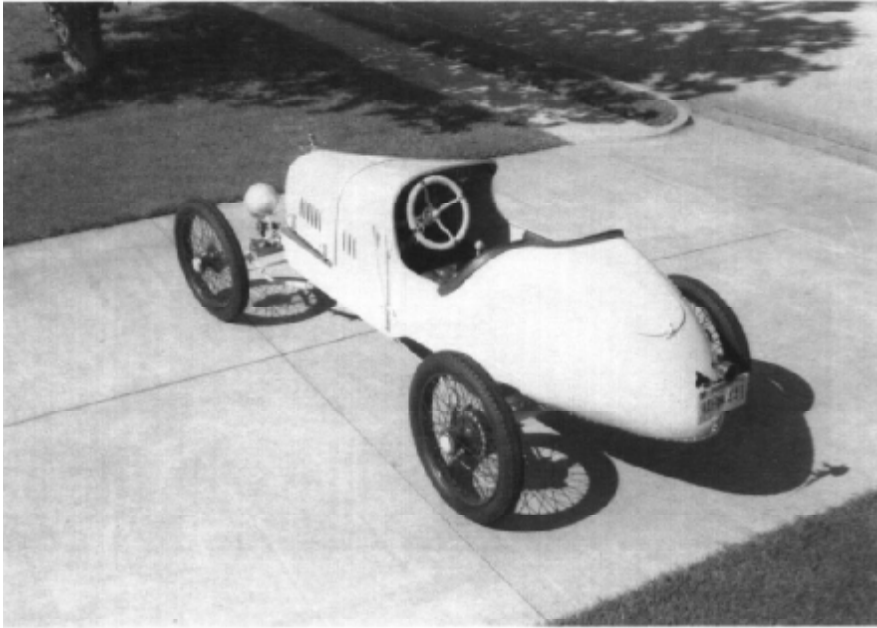


The body came equipped with an outside emergency brake lever and splash shields which extend 8 inches below the frame. The splash shields are cut away towards the rear of the body to clear the rear radius rods.



The torpedo tail contains a small luggage compartment and a fifteen gallon gas tank. Note the oval shaped deck lid and the exposed rivets.





An overhead view of the car.

Oklahoma. It was becoming clear to me that if the car was ever going to move under its own power, I had to get some help. Fred Houston and Bob Kasitz who operate a Model T restoration shop in Tulsa, Oklahoma, agreed to finish the car for me. The major restoration problem was the body. Several of the body panels were not restorable and were only useful as patterns. Bob took these old panels and fabricated new ones from them. This included the bottom section of the torpedo tail with all its compound curves! Also, all the wood framing had to be replaced. Many engineering problems were encountered but they were all eventually resolved. Everything was going well until we started to assemble the engine. We discovered that the "restored" crankshaft was badly bent and several bearing journals had been reground off-center. As I wanted to use this crankshaft since it had been used in the car, we found a repair shop that could salvage the crankshaft-but it took almost a year to get them to finish it. Finally, in July 1990, I was able to drive the car for the first time.

PACO Body Details

With the help of Harrah's research library I was able to identify the body as a Model 21 PACO, built by the Paco Manufacturing Company in Peoria, Illinois, between 1920 and 1922. This body has a number of unique features. In fact, the design was patented. The driver's seat was set seven inches ahead of the passenger seat which allows the driver to fling his elbows about during wild

maneuvering and not hit his passenger! The cowl on the passenger's side was cut away to allow easier entrance or exit from the body. The body was mounted six inches back from the stock Model T body location. This gives the car very pleasing proportions, but requires that the foot pedals, emergency brake lever, and steering column be modified. All the parts to make these changes were originally included when the body was purchased.

The body was designed to be mounted without fenders, so eight-inch wide splash shields were provided. These splash shields extend below the

frame and make the car look lower. The body also came with a torpedo tail with exposed rivet construction. A curved hatch in the tail leads to a luggage compartment and a 15 gallon gas tank. The gas tank was equipped with a pressure system using a brass hand pump mounted in the floor between the seats. A fuel pressure gauge was mounted on the passenger's seat back. This mounting location makes it almost impossible for the driver to read the gauge, so a riding mechanic is a must!

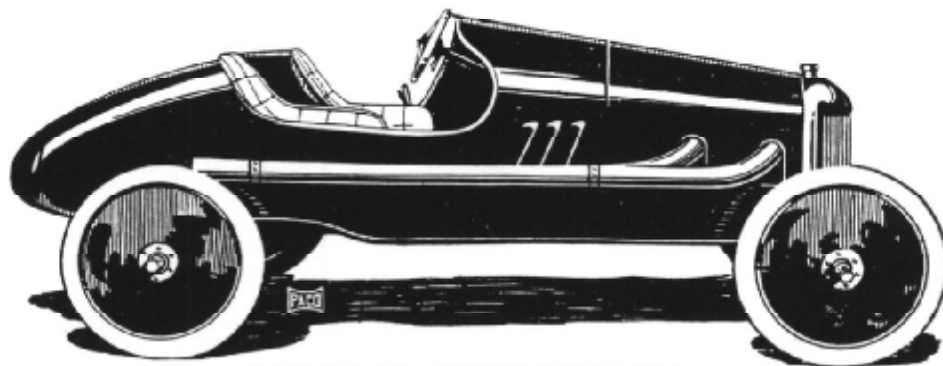
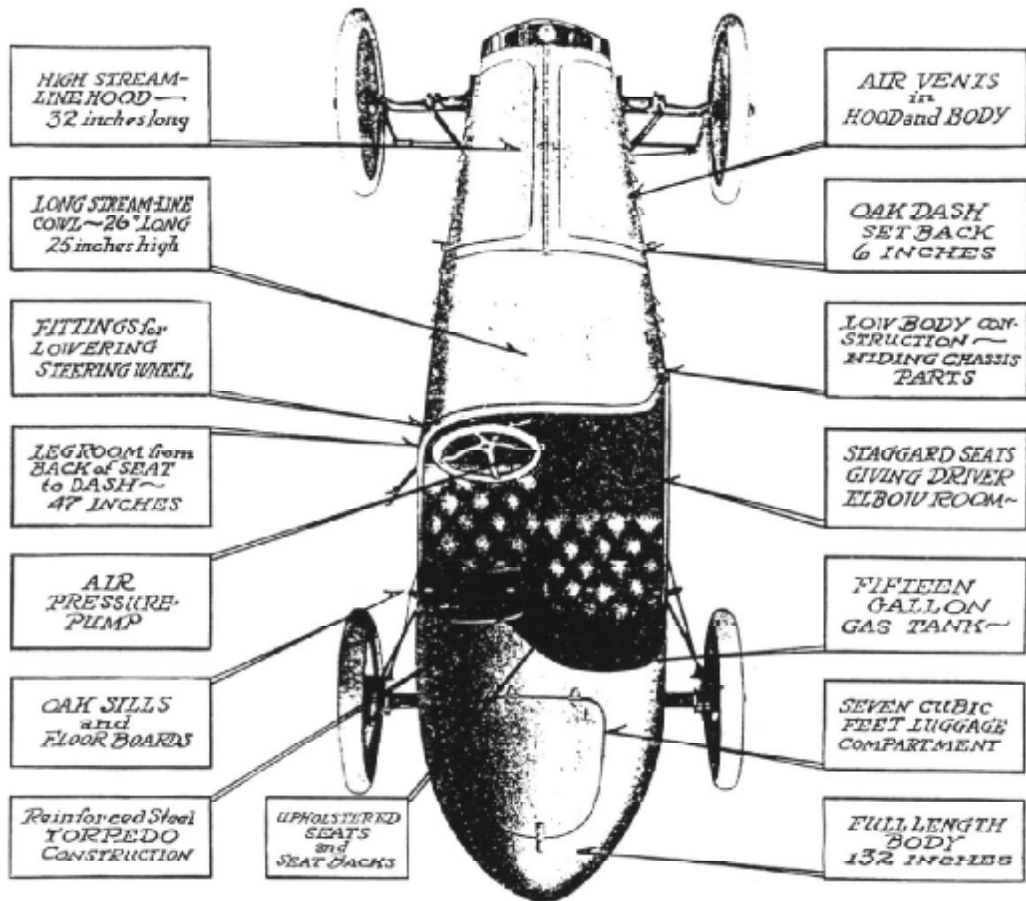
The foot pedals were modified by first cutting the heads from each of the existing pedals. Then three new pedals were mounted on a common cross shaft six inches behind the original pedals. Rods and clevises then connect the pedals together.

The steering column shaft was lengthened six inches, and the bottom mounting flange of the column was reversed so that it matched the angle of the floor boards. Also, the steering wheel is turned upside down in order to clear the cowl.

A new cross shaft was installed six inches behind the original emergency brake lever shaft. The emergency brake handle was removed from the original shaft and installed on the end of the new shaft which extends through the splash shield. A new brake lever was installed in place of the handle on the original shaft, and also on the inside end of the new shaft. A rod and clevises connect the new brake levers.

I traded some of my 1926 parts for a 1922

POINTS OF INTEREST—1921 MODELS



MODEL 21, WITH EXHAUST

From Paco's 1921 sales brochure, this diagram details a number of the Model 21's technical details.

engine and transmission. The drilled crankshaft was reused in this engine along with lightened and polished Ford connecting rods and aluminum pistons. The Green Engineering oil pump was also reused to feed oil to the main and rod bearings. The main shaft of the transmission was drilled to feed pressurized oil to the transmission bushings. An oil filter was installed in the aluminum sump mounted to the crankcase. The magneto weights were removed from the flywheel along with about fifteen pounds of metal machined from the face. A hot camshaft and a nickel steel cam gear were also installed to drive the oil pump. A Frontenac Model R cylinder head with an inch-and-a-half Zenith side draft carburetor was installed on the engine. A Bosch front plate distributor and Bosch coil make up the ignition system.

The front end of the car was lowered five inches with a suicide-type front bracket. This bracket moves the spring up five inches and forward two inches. This also moves the axle forward and extends the wheelbase two inches. Special split radius rods which mount to the frame rails with special mounting brackets were used.

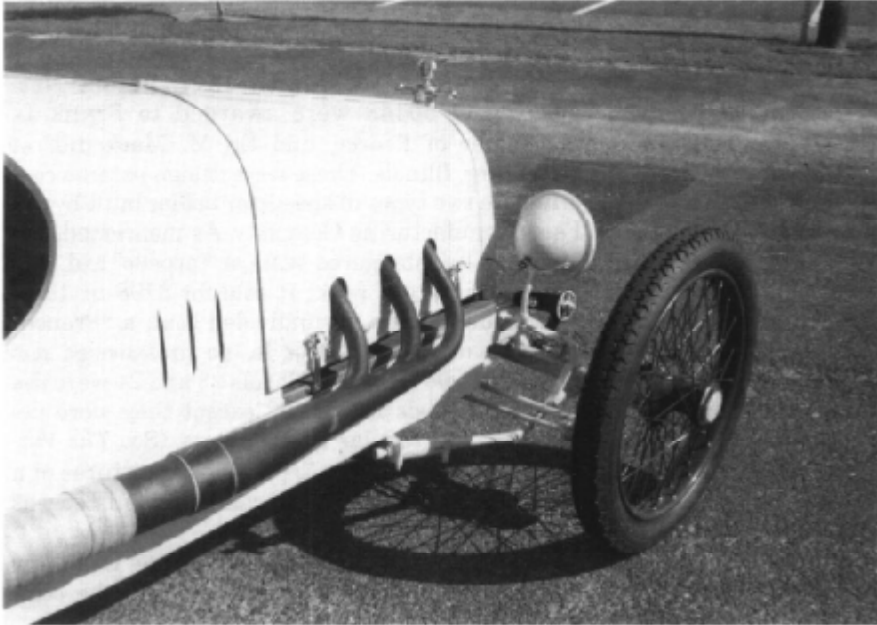
The rear end was lowered five inches with a modified rear spring. Initially the spring eyes were turned up but we found that the rear end would hit the spring. A new and longer main leaf with the spring eyes turned down was made up to solve that problem. Hartford friction



Above: The upholstery is diamond tufted leatherette. The diamond pattern was copied from an original picture. The fuel pressure gauge is mounted on the passenger's seatback. It is mounted here because pre-1920 bodies had no dashboard. It appears that the mounting location stayed the same on later bodies equipped with dashboards.

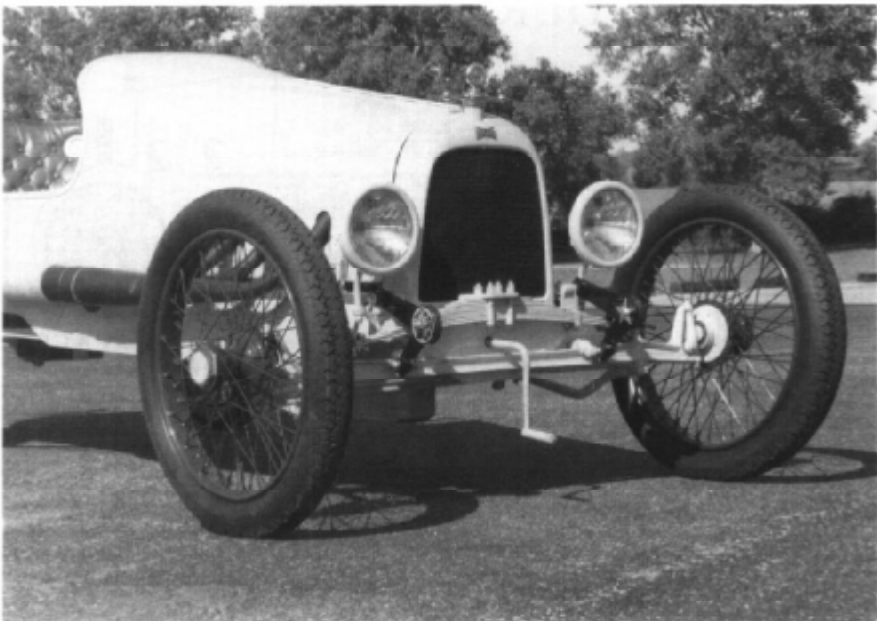
Below: The steering wheel has been reversed on the column to provide hand clearance around the cowl. The foot pedals are mounted on a common cross shaft 6 inches behind the original pedals. Rods with clevises run from the new pedals forward to the original pedals. The heads of the original pedals have been removed in order to clear the floorboards. A special bracket which came with the body braces the steering column. On the dash an oil pressure gauge, ignition switch/lampmeter, and AC speedometer are mounted.





Above: The front axle is equipped with special split radius rods. A special casting bolts to the frame and extends below the splash shield. A spring loaded end mounts to a ball on the special casting, and screws onto the radius rod.

Below: A special panel extends below the radiator and hides the front end bracket which bolts to the front cross member. This bracket moves the spring forward 2 inches and up 5 inches. Special brackets mount the Hartford shocks to the frame and to the axle.



shock absorbers were installed on both the front and rear.

A Ruckstell rear end with 3 to 1 gears was installed. The regular Ruckstell shift lever which mounts on the rear of the hogshead was too far forward for the driver to reach. A new shift lever mounted on a cross shaft attached to the frame rails was installed ahead of and slightly to the right of the driver's seat. Heavy duty AC external brakes were also used. These brakes use special brake drums which are the same diameter as the small Ford drums, but are three quarters of an inch wider. These brakes also used rods instead of cables to link them to the brake pedal.

Pasco adjustable spoke wire wheels were installed. These wheels are held on by a large four inch, nickel plated brass hub nut. Teeth are cut into this nut which engage a dog mounted to the wheel. This system is supposed to keep the nut from backing off. However, I've found that they tend to loosen slightly after fifty or so miles of driving. These wheels are apparently rare since they are the only ones I've ever seen. Most Pasco wheels have a smaller, two piece hub cap.

Advertisements from the 1916-1919 period show the PACO bodies equipped with brass "Livingston - style pointed radiators. The 1920 sales literature shows a round-top, slightly pointed radiator and states that special radiators and shells were available but

does not give any details. I searched for many years for a round-top, slightly pointed radiator, but finally had to settle for a round top and a flat core. This radiator had the correct shape but was much too tall. After removing five inches from the height it looks almost like the 1920 style radiator.

The hood was reproduced from pictures of original cars. It is unique in that it has only two pieces instead of the usual four. This makes the hood very inconvenient to raise and lower, and it will not stay open by itself. However, I am sure that this is how the hood was originally built, so we decided not to change it.

The outside exhaust system was an option on the car. It was also reproduced from original drawings and pictures. I built a twelve-inch long "glass pack" muffler which fits inside the four-inch diameter exhaust pipe. It is held in place with one bolt and can be easily removed if one wants to hear her "bark."

I have not as yet been able to determine if the upholstery was leather or leatherette. However, by the early twenties most low priced cars had switched from leather to leatherette. Also, if leather was used, I think that fact would have been advertised and it never was. So I decided to use leatherette. The original diamond tufted pattern was copied from an original picture. There were no springs in the seat backs or cushions. The seat backs are designed with a lip which extends past the edge of the body. The seat back upholstery has a flap which fits over this lip and holds the upholstery in place. A row of snaps along the bottom edge of the seat back holds the upholstery tight to the back. The seat cushions are four inches thick and are removable. There is a small tool compartment under the driver's seat, while the battery box is under the passenger's seat.

History of the PACO Manufacturing Company

The first advertisement I have found for the PACO body appeared in the "Fordowner" magazine in March of 1916. The body was being sold by the Peoria Accessory Co., Peoria, Illinois. In December 1916 an ad was placed in "Motor Age" by the Fried and Stoner Co. of Peoria. The body was called the "Fasco" but the picture in the ad looks just like the PACO.

Sometime in 1916 or 1917, it appears that the Peoria Accessory Com-

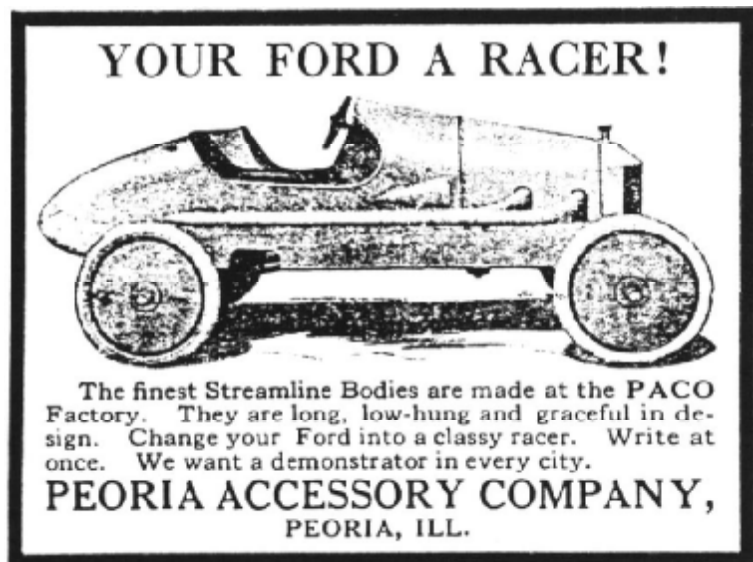
pany changed its name to the Paco Manufacturing Company.

In January and March 1917, Patent Nos. 50218 and 50448 were awarded to Frank L. Mackemer of Peoria, and Eli M. Mackemer of Galesburg, Illinois. These were design patents covering the two types of speedster bodies built by the Paco Manufacturing Company. As mentioned, the Model 21 has staggered seats, a "torpedo tail," and a pressurized gas tank. It sold for \$198 in 1921. The Model 22 has an undivided seat, a "French tail" of a more pointed style, no pressurized gas tank, and sold for \$153. Models 23 and 24 were the same as Models 21 and 22 except they were designed to use regular Ford fenders. (See *The Vintage Ford*, Vol. 18, No. 5, page 34 for pictures of a Model 23.) In 1923 a model called the Palster was also built and sold for \$58.

In 1917 the Paco Manufacturing Company was located in Galesburg, but by 1920 the company had returned to Peoria.

I found Pace ads up through 1923, so possibly that was the last year of production. The number of bodies built is unknown. However, a relative of the Mackemers told me that he thought several hundred had been built, and that some had been exported overseas.

In 1920 it appears that the top and windshield were lowered several inches. Pictures of 1919 models show a rather tall, awkward-looking top, while the 1920 model has a much lower and better proportioned top. The top was made of mohair. The top and windshield, as well as the outside exhaust,



YOUR FORD A RACER!

The finest Streamline Bodies are made at the PACO Factory. They are long, low-hung and graceful in design. Change your Ford into a classy racer. Write at once. We want a demonstrator in every city.

PEORIA ACCESSORY COMPANY,
PEORIA, ILL.

The first known advertisement appeared in the March 1916 edition of "Fordowner" magazine. Note the Livingston-type radiator and the air scoop on the side of the body.

Shown here and on the facing page are the patents awarded to Frank and Eli Mackemer for two types of speedsters. The one shown here, with the staggered seats, is the PACO Model 21. The design shown on the facing page, with the undivided (straight bench) seat, is their Model 22.

DESIGN.

F. L. & E. M. MACKEMER.
 AUTOMOBILE BODY.
 APPLICATION FILED JAN. 19, 1917.

50,448.

Patented Mar. 13, 1917.

Fig. 1

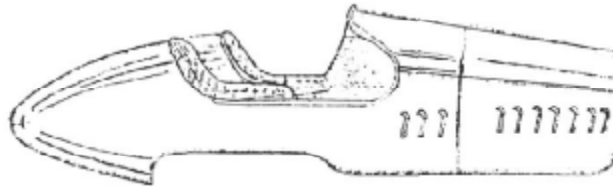
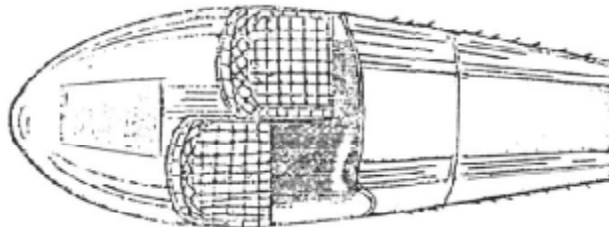


Fig. 2



UNITED STATES PATENT OFFICE.

FRANK L. MACKEMER, OF PEORIA, AND ELI M. MACKEMER, OF GALESBURG, ILLINOIS.

DESIGN FOR AN AUTOMOBILE-BODY.

50,448.

Specification for Design.

Patented Mar. 13, 1917.

Application filed January 19, 1917. Serial No. 149,567. Term of patent 34 years.

To all whom it may concern:

Be it known that we, FRANK L. MACKEMER and ELI M. MACKEMER, citizens of the United States, and residents, respectively, of Peoria, Peoria county, Illinois, and Galesburg, Knox county, Illinois, have jointly invented a new, original, and ornamental Design for Automobile-Bodies, of which the following is a specification, reference being had to the accompanying drawing, forming part thereof.

In the accompanying drawing, Figure 1 is a side elevation, and Fig. 2 a top plan, together showing our new design.

We claim:

The ornamental design for an automobile body, as shown.

FRANK L. MACKEMER.
 ELI M. MACKEMER.

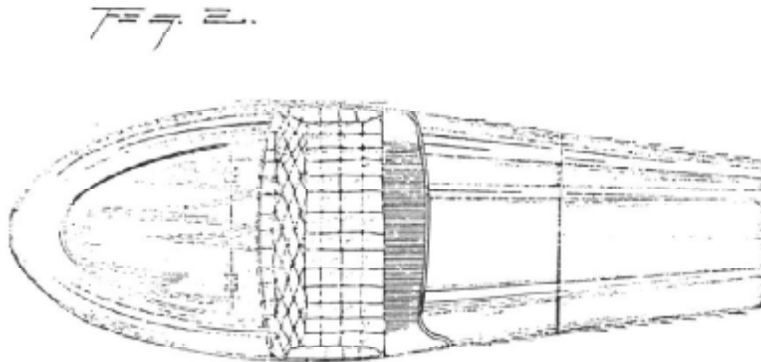
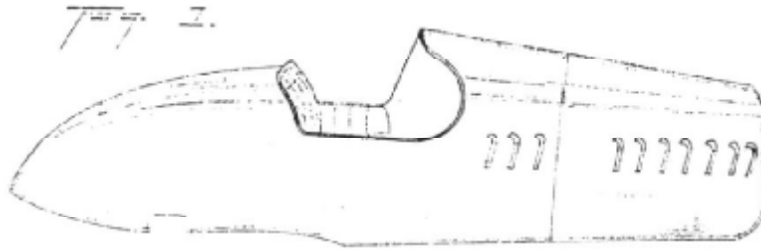
DESIGN.

F. L. & E. M. MACKEMER.
AUTOMOBILE BODY.

APPLICATION FILED JUNE 17, 1916.

50,218.

Patented Jan. 23, 1917.



UNITED STATES PATENT OFFICE.

FRANK L. MACKEMER, OF PEORIA, AND ELI M. MACKEMER, OF GALESBURG, ILLINOIS.

DESIGN FOR AN AUTOMOBILE-BODY.

50,218.

Specification for Design.

Patented Jan. 23, 1917.

Application filed June 17, 1916. Serial No. 104,224. Term of patent 3½ years.

To all whom it may concern:

Be it known that we, FRANK L. MACKEMER and ELI M. MACKEMER, citizens of the United States, and residents, respectively, of Peoria, in the county of Peoria and State of Illinois, and Galesburg, county of Knox, and State of Illinois, have jointly invented a new, original, and ornamental Design for Automobile-Bodies, of which the following is a specification, reference being had to

the accompanying drawing, forming part thereof.

In the accompanying drawings, Figure 1 is a perspective view, and Fig. 2 is a top plan together showing our new design.

We claim:
The ornamental design for an automobile-body, as shown.

FRANK L. MACKEMER.
ELI M. MACKEMER.

<p>Prices until Jan. 1st, '17. Model L. \$ 85.00 Model H. \$115.00 f.o.b. Peoria</p> <p>Prices after Jan. 1st, '17. Model L. \$100.00 Model H. \$138.50 f.o.b. Peoria</p>	<p>A "Fasco" Racing Body Fits Your FORD Made of the very best extra heavy steel and fine workmanship. The lines for "FASCO" were taken direct from the famous French racers. The classiest speedster body on the market. Sold complete, ready to mount on your Ford chassis.</p> <p>PRICES ADVANCE JAN. 1, '17 Our supply of materials laid in before the great advance in price will be exhausted by the first of the year. Order yours now, as the 1917 prices will be considerably higher. Write for particulars and specifications today. Agents wanted where we are not represented.</p> <p>Fried & Stonier Co. Peoria Dept. 15 Illinois</p>
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Above: This ad was in the December 1916 edition of "Motor Age" magazine. The ad was placed by the Fried & Stonier Co. of Peoria, and the body called a "Fasco". The picture appears identical to the PACO and the advertiser's address was Peoria, but any connection between the two bodies/companies is unknown.

were options. The hood of the 1919 model has eight louvers while the 1920 models have only six.

In 1920 and again in 1921, the company produced a large three-color sales brochure. These brochures are identical except for the date. Two original copies of these brochures are known to exist. Other than several ads which appeared in

like a sports car of the 50 s or 60 s. With its hot cam and four-inch exhaust pipe, it sounds like a race car. It accelerates well and will top 60 mph with half the throttle left. I m sure it would top 80 mph if I had the courage to let it out! Needless to say it turns heads and draws a crowd on every outing. It was worth waiting 20 years for!

the various trade journals and the design patents, no other literature is known to exist.

During the past 20 years I have found five other PACO bodies, all Model 21 s. Four appear to be 1919 or earlier, since they have the higher top and windshield. The fifth may never have had a top, so I could not determine the year of manufacture.

This car is very exciting to drive. The lowered suspension and Hartford friction shocks make it come flat with little body roll. It handles much

Right: This ad, placed by the Paco Manufacturing Company, now of Galesburg, Illinois, appeared in the September 1917 edition of "Ford Owner." In advertisements in 1920, it appears the company returned to Peoria.

PACO PACO racing bodies for Ford cars are made the way you would have yours made if you were placing a special order. The low, streamline body is taken direct from the French racers; it is classy, speedy, comfortable and rides absolutely quietly. This design of body is patented and can not be had except by getting a PACO. Let us send you our new three-color literature with illustrations from photos, specifications, etc.

PACO MANUFACTURING COMPANY
Galesburg, Illinois

Dept. 9
WRITE TODAY

