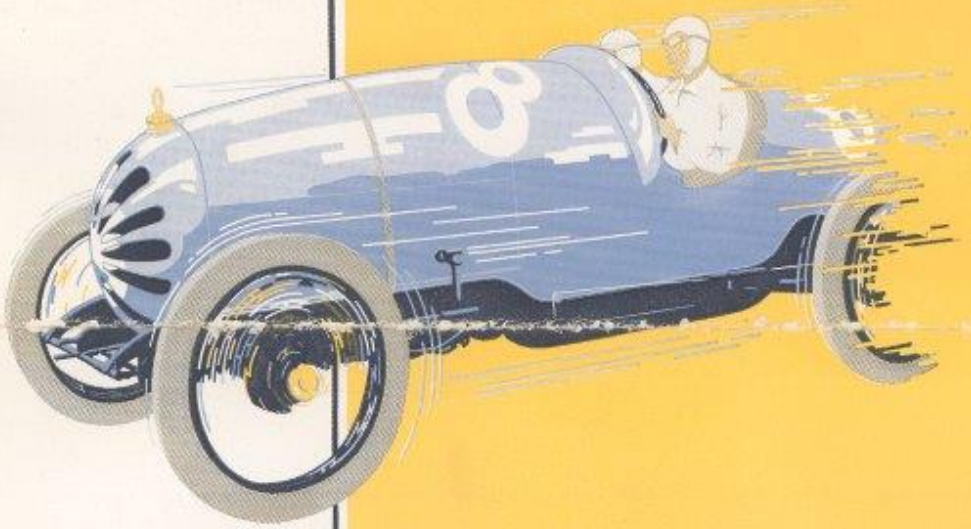
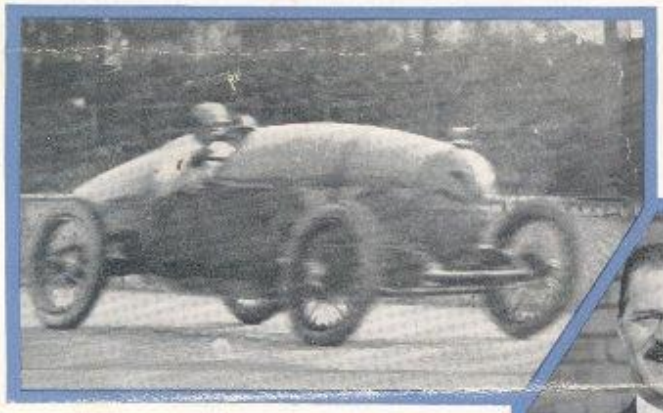
SEMPER PLUS

Announcing a NEW Car



FRONTENAC

The World's Greatest Car



World Winner 1921

Louis Chevrolet

World Winner 1920

LOUIS CHEVROLET, the intrepid designer-driver of automobile racing, on May 31, 1917, said: "I am particularly glad to have won because the victory vindicates my theory with regard to the construction of a racing car."

These words were uttered after the International Sweepstakes 250-mile race was staged in the big bowl at Cincinnati. Louis Chevrolet himself won the race in a Frontenac and his younger brother, the late Gaston, was close behind him.

He meant that the experience he had gathered from the time of his first connection with automobiles back in 1897 with Mors in France had culminated in a successful motor and chassis, designed and built by himself with the aid and assistance of his famous brothers, Arthur and the late Gaston, themselves wonderful mechanics and drivers.

But he did not stop there. He kept right on designing and building. He was never satisfied. Then in 1920 his car won the greatest of all racing contests—the International 500-mile race at the Indianapolis Motor Speedway. But still he was not contented. He continued the self-imposed task of satisfying himself.

But the following year his car performed a feat new in automobile history—winning for the second time, and consecutively, too, and with a new car each time—that great battle of speed and endurance at Indianapolis.

And it was then that he felt to his own satisfaction, he had the practical knowledge to build the greatest motor car of all time. And it was a short jump to incorporate his years of experience in the Frontenac car he is announcing to the public at this time.

He says—and you will agree with him when you see it and know its performance—that it is the car that the public has been waiting for all these years since the first horseless carriage frightened its spectators into a frenzy.

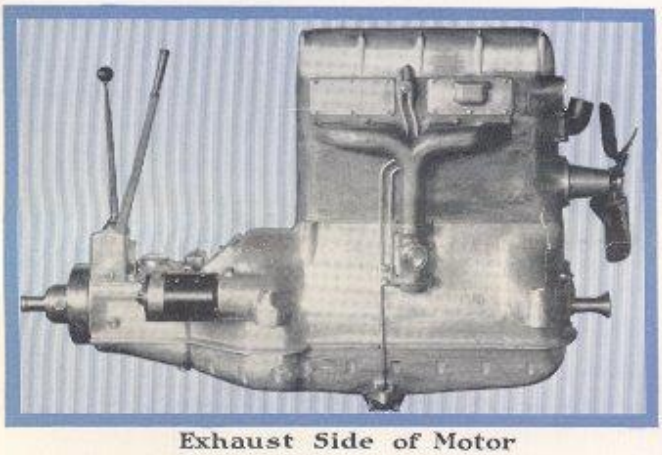
It is a certainty that no man is better fitted to make this automobile than Louis Chevrolet. For he has not only designed and built the cars—but he has driven them—on speed paths the country over—and he feels the pulse of the throbbing heart of the motor car through the steering wheel and accellerator pedal. Louis Chevrolet knows.

Typical of his French ancestry, he has been an untiring worker. Hours meant nothing to him. He had a goal to reach. And that he has now reached that goal is accepted by everyone familiar with automobiles.

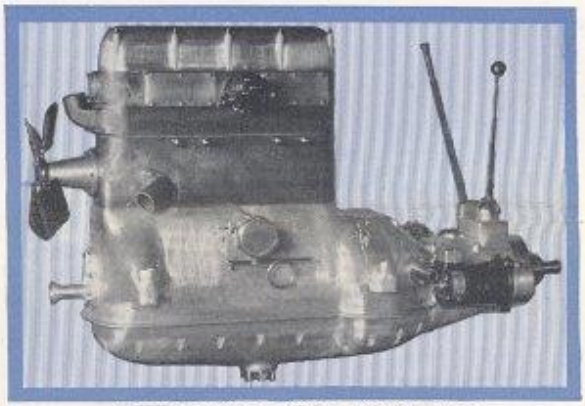
And he has had a unique help in building this new Frontenac car, which is being received with such thunderous acclaim. Louis Chevrolet has probably driven more different cars than any other race driver. That certainly has been an experience.

His two brothers were at his side driving many of the races. Their impressions were valuable. And blood is thicker than water.

And so it stands to reason that the new Frontenac has a perfect right to be a great car with all the features claimed for it.



Exhaust Side of Motor



Carburetor Side of Motor

The Frontenac Motor

Here are some of the details of the most remarkable motor you have ever heard about
Designed by the man who built two world champion race creations

Rear view of Motor

Front view of Motor

THE Frontenac motor sweeps you off your feet the minute you see it.

It reminds you of a long, lean, fleeting greyhound, sleek and graceful in its appearance and motion. You will admit it is probably the best looking motor you have ever seen—and you have the assurance of Louis Chevrolet, the master driver-builder of race cars, that it out-performs even its grand appearance.

The Frontenac motor is original in its design, extremely clean cut and tailored with an eye to keeping it clean, with a minimum of effort.

It is of the overhead camshaft type that is used in all race cars, and is driven by a double silent chain fitted with automatic take up sprockets. This Frontenac motor differs from others about which you have heard, in that the camshaft construction and valve actuating mechanism are in a separate compartment from the valves themselves and for this reason, can be thoroughly lubricated without experiencing the troubles found in other types of overhead camshaft motors, viz the drawing in of oil around the inlet valve stems at low throttles, when the vacuum in the inlet manifold is very high, a condition present at least 50 per cent of the time your motor is in operation. The Frontenac type of construction eliminates the smoky motor, excessive carbon deposits and is economical in oil consumption.

It is a simple matter to reach the interior of the Frontenac motor. The entire head can easily be removed from the motor, the valves removed, cleaned and ground without disturbing the camshaft or any of its members. The valves may also be adjusted through amply large hand holes on either side of the cylinder head.

The oil filler is conveniently located at the top of the Frontenac motor and is sufficiently large to enable one to pour oil into it from most any kind of a container.

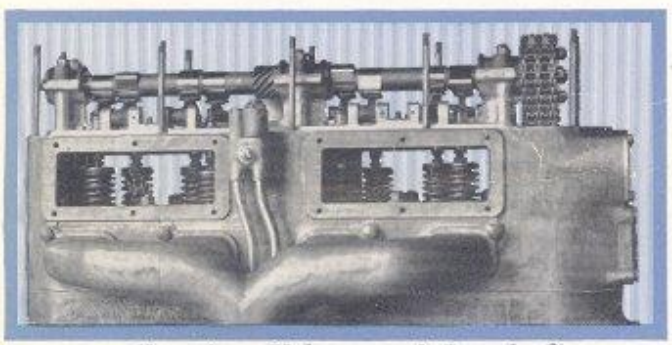
The entire Frontenac design is to make it as easy as possible to attend to the little things that are necessary to the every day life of any motor. This undoubtedly is a reflection of Chevrolet's racing experience, where precious seconds in pits during races, must be utilized to the greatest extent. Thus racing motors are convenient and readily accessible and true, reflection of the Frontenac motor may be seen through the mirror of any racing event.

There is no fan belt to become loose on the Frontenac. The fan is mounted on a very clean housing and is driven by the relay sprocket-shaft of the driving chains.

If it ever becomes necessary to crank a Frontenac motor by hand, it will indeed be an easy matter to insert the starting crank due to a funnel shaped receiver.

Draining the oil from the crank case in the Frontenac has been made as simple as a turn of the wrist. All that is necessary is to turn a valve, which is built into the motor and which can be done without getting under the car. This valve, being a part of the motor, cannot be knocked off or opened by high road crowns or flying stones.

The carburetor is mounted directly on the side of the crank case. The inlet manifold is completely surrounded by water which keeps the gases at an even temperature. Directly across from the carburetor at the other side of the crank case, is provided what is known as an exhaust stove. Inside this stove and in the path of the hot exhaust gases, is a piece of highly heat conductive material projecting into the path of the incoming mixture from the carburetor. The heat is thereby conducted from the exhaust through this hot tube which is sufficiently high in temperature to rapidly gasify the heavy particles that do not readily vaporize. Thus, insuring a clean burning mixture and economy.



Showing Valves and Camshaft

These photographs are absolutely unretouched. They show the Frontenac motor exactly as you would see it in the factory—before it is painted and refinished. Isn't it a wonder?

Frontenac Details

SIMPLICITY is the keynote of the chassis of the new Frontenac car. It is apparent that the designers have taken to heart the lessons learned in racing in building this chassis, and if there is anything that stands out above the clean appearance and lines of the chassis, it is its sturdiness.

They, of course, are very evident. But the thing that is most impressive is the elimination of all unnecessary rods and encumbering devices.

Four wheel brakes are a necessary adjunct to the fleeting speed of the Frontenac motor. They are yet new in America, but they have been successfully proven a valuable asset in the motoring creations of foreign countries, and racing has proven that they are necessary for speedy cars. It is even more important to stop quickly than to accelerate quickly.

There is no difference in the driver's operation of this unique braking system—all four brakes work from the same foot pedal.

Comfort has been carefully worked out in the Frontenac, and it rides the road with an ease that characterized the speeding fleetness of the Frontenac in winning two consecutive International races. Both the front and rear springs are exceptionally long and flexible. The rear springs have two reversed top leaves taking up the strain due to the drive.

Another example of the thorough simplicity and cleanliness of design of the Frontenac chassis is the splash pan around the motor. It is a part of the frame and makes a complete enclosure from the radiator to the rear end of the transmission. There are no bolts of any kind securing this to the motor. The splash pan is held rigidly to the motor, but under its own tension.

The frame is of unusually deep section with ample cross members and gusset plates to insure a very strong frame, thus eliminating the possibilities of body squeaks, loosening of parts, and rattles.

The rear axle is unusually clean-cut in appearance and very light. It is of the three-quarters floating type.

There is a three-speed selective transmission as a unit part of the motor. It differs widely from the average type, and drives the generator. This generator is located at the left side of the transmission and is driven by the sliding gear shaft. This eliminates any of the sudden acceleration which takes place when the generator is driven from the motor or from any other location on the transmission.

The gear shift lever and the emergency brake lever are on top of the transmission. These operating controls are most conveniently located and the driver does not have to move from his comfortable driving posture to shift the levers or operate the emergency brake.

The emergency brake is of the internal expanding type, directly at the rear end of the transmission, and the actuating mechanism is completely enclosed in the transmission case, making an exceptionally dirt-proof arrangement.

Spring bumpers are built into both the front and rear of the chassis.

OUTLINE SPECIFICATIONS

MOTOR: 4 cylinder, en bloc—detachable head—bore 3¾, stroke 5½. 18-23 H. P. S. A. E. rating, actual 60 H. P. Displacement 196-8 cubic inches. Chain-driven overhead camshaft with extra large bearing surfaces operating in a separate chamber from valves, thus eliminating oil trouble through valve stems and smoky motor. This is an exclusive feature. Valve adjustment very accessible. Combustion chamber machined all over, insuring uniformity of each cylinder displacement.

LUBRICATION: Motor, pressure feed to main and connecting rod bearings; also to camshaft and chain idlers.

COOLING SYSTEM: Thermosyphon with large capacity radiator, insuring perfect cooling at all speeds.

Fan direct driven through chain relay shaft. No gears or belt. Mounted on annular ball bearings.

IGNITION: Delco.

CARBURETOR AND FUEL SUPPLY: Carburetor constant level float type. Priming control from dash. Special design fuel heating arrangement.

Gasoline tank of approximately 20 gallons capacity with 2½ gallon reserve. Equipped with indicator gauge. Gas tank mounted rear. Vacuum system gasoline feed.

STARTING AND LIGHTING SYSTEMS: Delco starter mounted at side of transmission attacking flywheel from rear, leaving side of motor perfectly unencumbered. Delco generator mounted on opposite side of transmission. Chain driven from rear end of transmission main shaft. This arrangement permits use of shorter wires and insures better efficiency of the whole electrical system, and makes for long life of generator, as same is not subject to strains of quick acceleration.

CLUTCH: Dry disc.

TRANSMISSION: Selective sliding gear type. Three speeds forward and one reverse.

DRIVE: Hotchkiss with very generous rear springs specially designed for this service.

FRAME: Deep channel section, sturdy and substantial.

WHEELBASE: 120 inches.

SPRINGS: Semi-elliptic front and rear, special alloy steel with very large diameter spring bolts containing oil reservoir.

AXLES: Drop forged "I" beam, front axle, special design. Rear axle, three-quarters floating type.

WHEELS: Wire, equipped with 32 x 4 inch cord tires, one extra wheel.

BRAKES: Service brakes internal expanding on all four wheels. Emergency brake on transmission.

CONTROL: Left-hand drive. Center gear shaft. Emergency brake lever special design.

BODY: Latest design, built of best material obtainable.

FENDERS: One-piece full crown made of heavy gauge material.

TOP: Latest design, one-man type. Curtains opening with doors, built of high-grade materials.

WINDSHIELD: Clear-vision.

EQUIPMENT: Windshield cleaner, motometer, spotlight, electric motor horn, jack and special tool equipment, speedometer, front and rear collision bumpers especially designed light and built-in chassis.

FRONTENAC MOTOR COMPANY
INDIANAPOLIS, INDIANA, U. S. A.