Packard

"38"

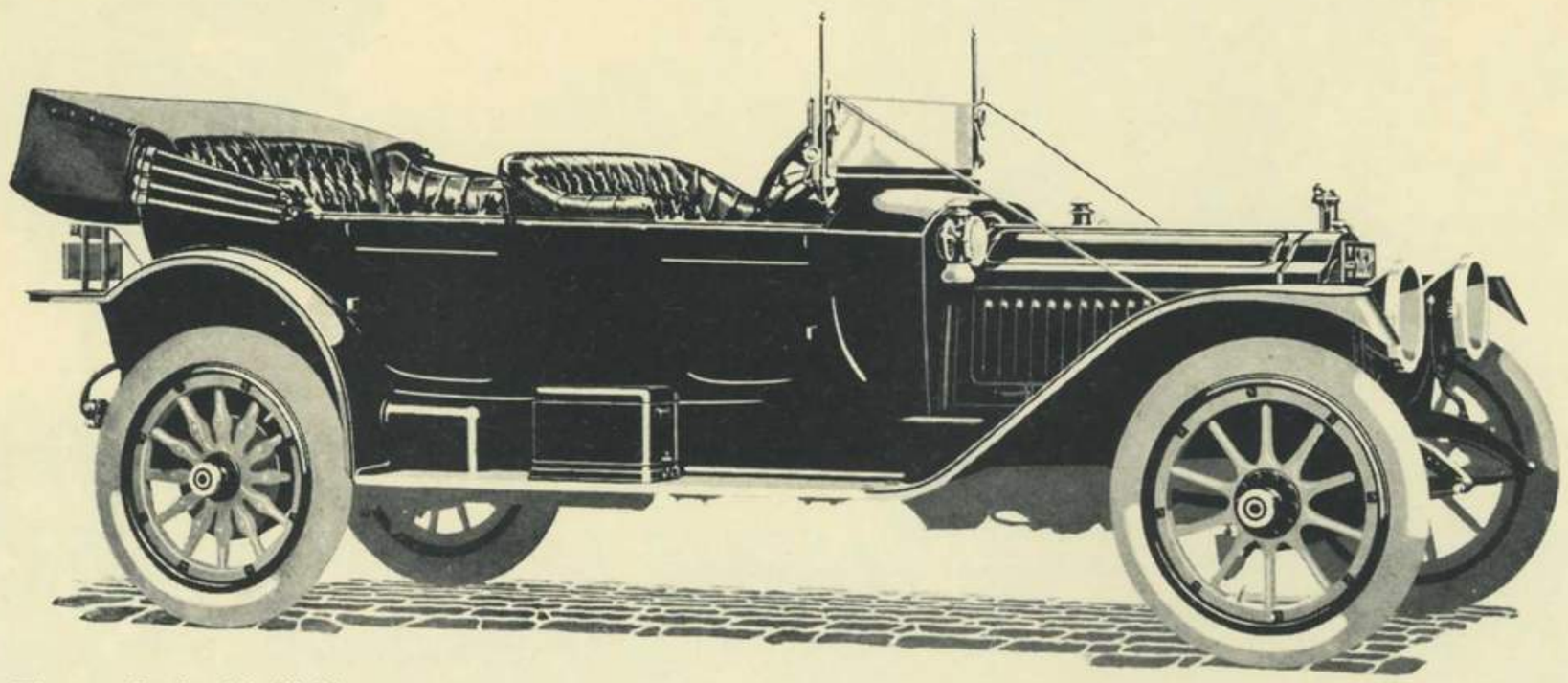
1913


ALEXANDRE LÉVY

THE PACKARD IDEA

OUR BIGGEST ASSETS ARE REPUTATION FOR MAINTENANCE OF PRICE, SERVICE TO OWNERS, AND A SQUARE DEAL FOR EVERYBODY · THE PUBLIC KNOWS THAT BACK OF THESE BUSINESS PRINCIPLES IS THE BEST PIECE OF MACHINERY THAT EVER WENT UPON THE HIGHWAYS · WE HAVE JUST ONE WAY OF DOING THINGS WE ARE GOING TO KEEP RIGHT ON ALONG THE SAME LINES AS LONG AS WE STAY IN BUSINESS

PACKARD MOTOR CAR COMPANY
DETROIT, MICHIGAN



The 1913 Packard "38" Phaeton

A SMALLER SIX-CYLINDER PACKARD

IN the Packard "38" carriage, are more exclusive features—more essential improvements that directly appeal to the owner and driver—than ever before have been embodied in any one motor vehicle.

Left Drive. Avoids the necessity of stepping into the street.

Electric Self-Starter. Easily and simply operated from the driving position.

Centralized Control. A Packard arrangement that gives complete mastery of car from the driver's seat. Compact control board at the finger tips, operated with the slightest effort.

Electric Lighting. Controlling switches at the centralized control board.

Magneto Ignition. A high tension dual ignition system independent of the self starting battery and motor-generator, insures Packard efficiency at all speeds.

Hydraulic Governor. Enables the novice to drive with the assurance of an expert. Prevents "stalling" the motor in crowded traffic; prevents racing the motor when "declutching;" affords agreeable uniformity of road speed without requiring the skillful use of the accelerator pedal.

Six-Cylinders Perfected. Flexibility, silence, constant efficiency, giving motion with no sense of exerted power.

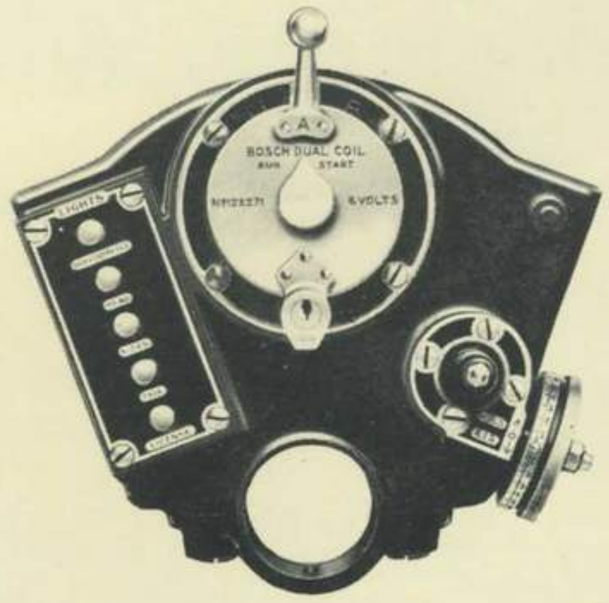
Dry Plate Clutch. Proof against burning; smooth and certain of engagement.

Forced Feed Oiling. Especially desirable for "sixes." An auxiliary system feeds oil directly to the cylinder walls and is automatically regulated for power requirements.

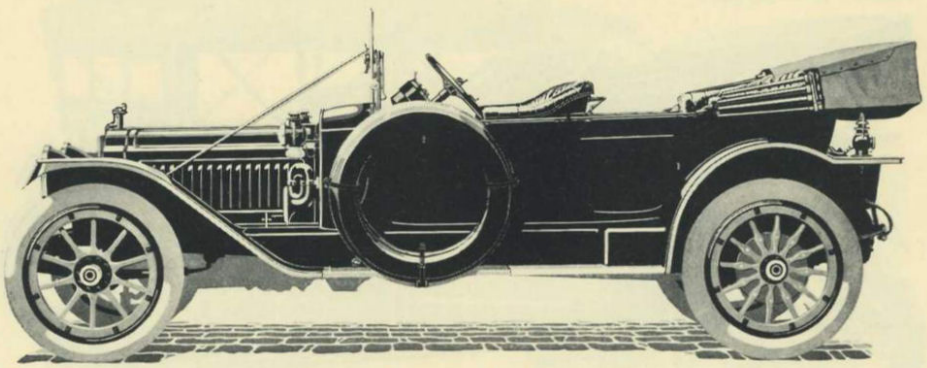
Six-Inch Depth of Frame. Prevents body distortion and cramping of doors.

Large Size of Crank Shaft. The diameter of the crank shaft is two and one-eighth inches. Ample size of bearings insures maximum period of service without refitting.

Short Turning Radius. The Packard "38" will turn around in a circle forty-one and one-half feet in diameter.



Detail View of Packard Control Board



The 1913 Packard "38" Four-Passenger Phaeton

A SMALLER SIX-CYLINDER PACKARD

The sum of these essentials is to be found in no other car. Thus the Packard "38" is in every sense the distinctively modern motor carriage.

The left drive is a triumph of common sense over a tradition inherited from the days of horse-drawn equipages. It is no longer necessary to step around the front of the car in a crowded or muddy thoroughfare. Passengers enter the front compartment directly from the curb.

The electric starter makes left drive a logical development. The driver touches a push button, presses a pedal and, as the motor turns over, throws the ignition switch. A low pressure acetylene primer is included in standard equipment to assist starting in extremely cold weather.

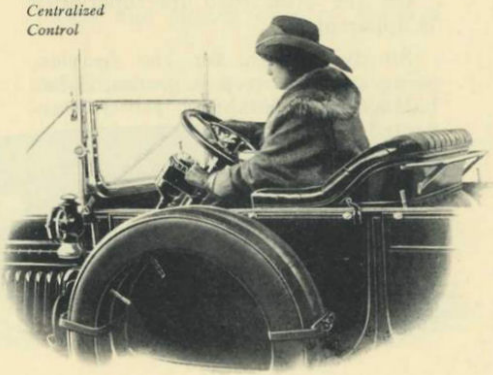
The storage battery, which supplies the current for the self starter, is charged by the motor-generator. The entirely distinct high tension dual ignition system, with magneto and separate storage battery, gives assurance of constant efficiency under all conditions of driving.

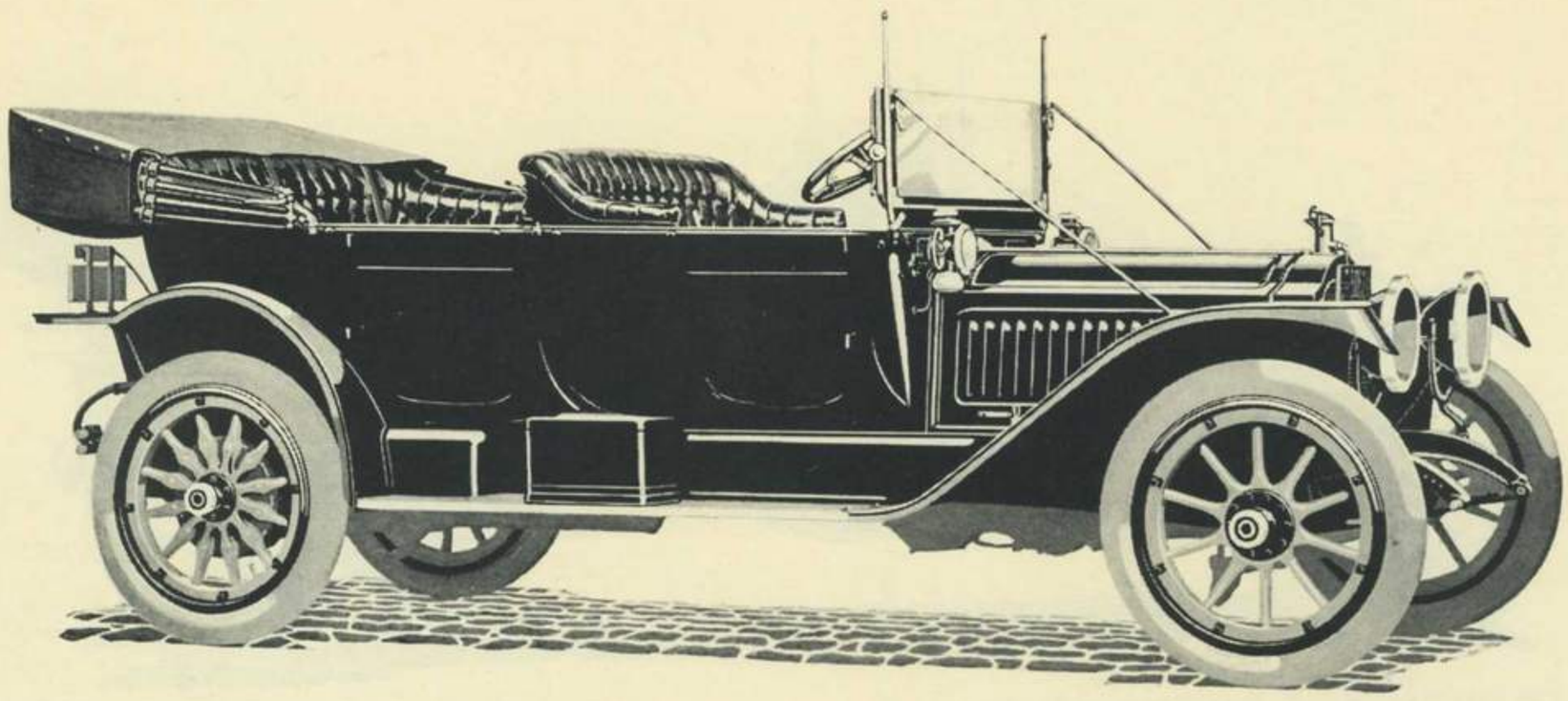
Centralized control, used for the first time on the Packard "38," brings every detail of operation within convenient reach of the operator. Starting, lighting, ignition and carburetor controls are in the control board, on the steering column.

Flexibility and speed in get-away are prominent among the qualities of the "38" carriage.

According to the A. L. A. M. formula the new Packard is rated at "38" horse power. At 1600 revolutions per minute, under the brake test, the actual horse power is shown to be 60.

The Packard Centralized Control





The 1913 Packard "38" Touring Car

A SMALLER SIX-CYLINDER PACKARD

A degree of silence, notable even in a Packard, is the result of enclosing the motor valves. The aluminum covers are easily detachable.

The new body styles offered with the "38" are distinguished by luxurious curves and the clean-cut lines of exclusive and correct design.

The mere recital of Packard qualities cannot convey the full impression of the comfort, the strength and dependability of the "38."

On the open road its superiority is apparent.

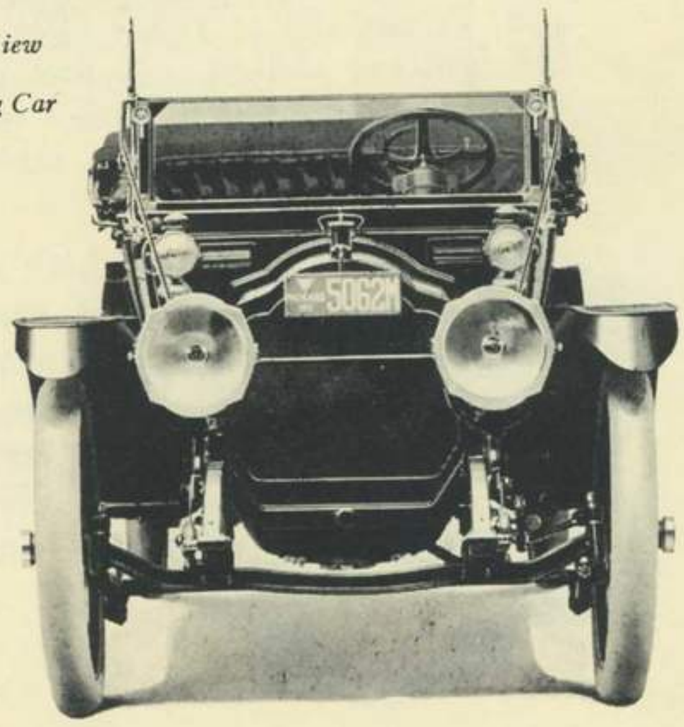
Sturdy enough for the heaviest going and the steepest grades, it has balance and durability for uninterrupted touring enjoyment.

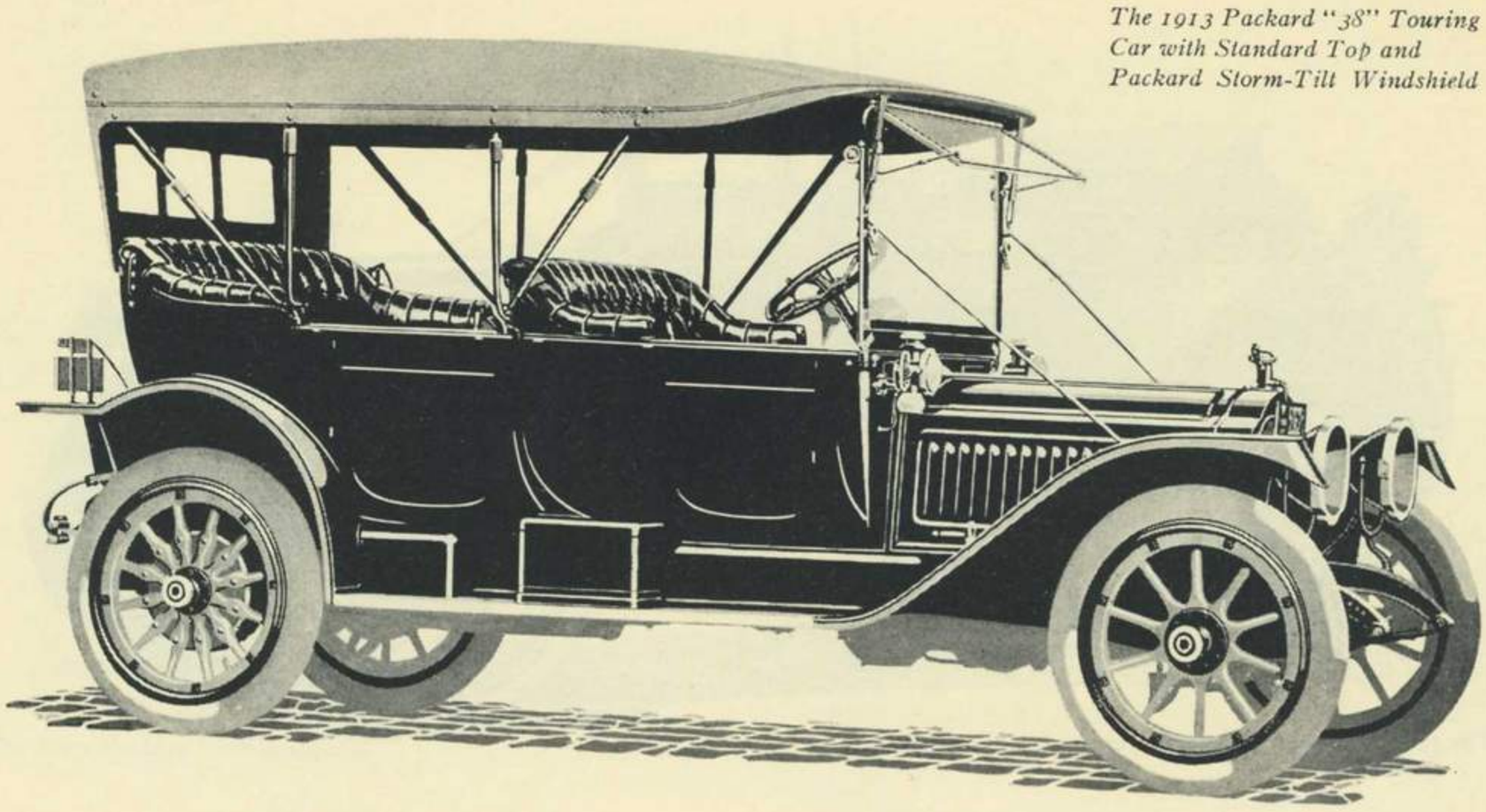
The Packard "38" was conceived simultaneously with its larger six-cylinder prototypes.

When the six-cylinder idea had been fully demonstrated to be worthy of adoption, Packard engineers applied themselves to the development of a consort to the Packard "48;" a car, which, upholding the traditions of the "30," should embody every proved advancement in design and construction.

Experiments, tests and research, which preceded the acceptance of a definite form for this smaller six, began more than three years ago. At the time the groundwork for the larger sixes was laid, the present "38" was

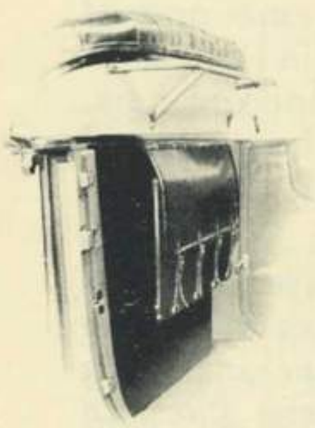
Front View of Touring Car





The 1913 Packard "38" Touring Car with Standard Top and Packard Storm-Tilt Windshield

A SMALLER SIX-CYLINDER PACKARD



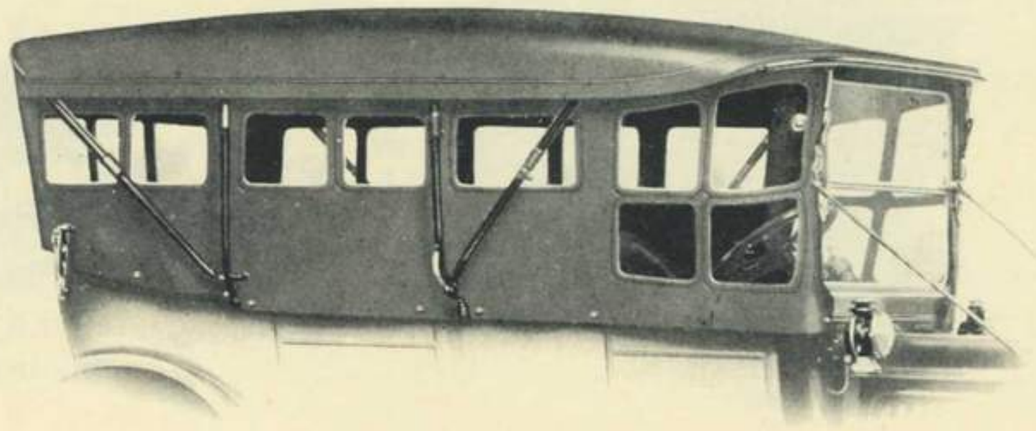
Receptacle for Side Curtains

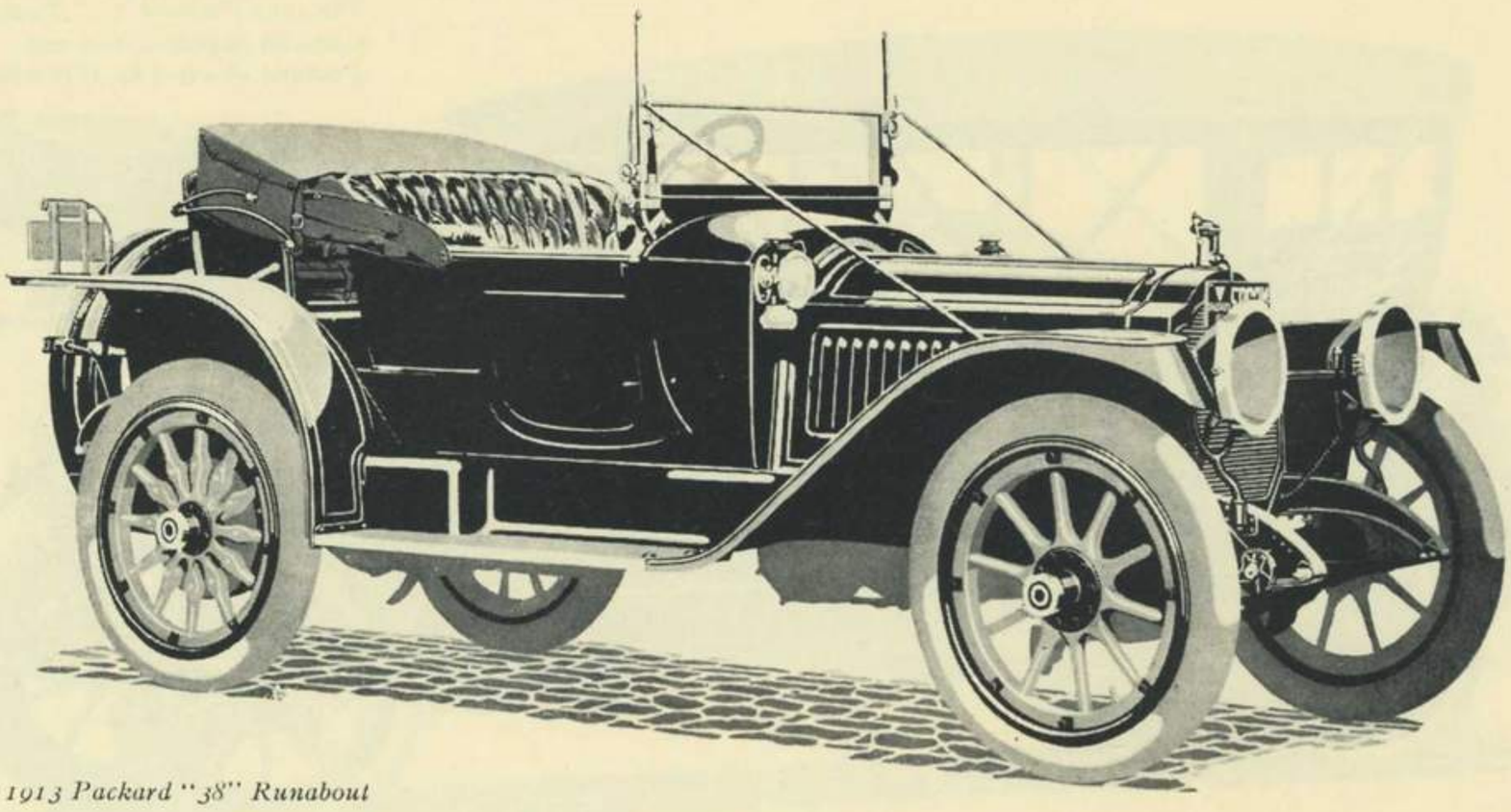
projected and since then in Packard laboratories and experimental shops its evolution has been a matter of systematic progress.

The "38" profited by the rigorous policy of experimentation which the Packard factory has always pursued. The quest for materials to which the Packard reputation could be entrusted, began long before the car itself took form. Then, as each unit was brought into shape, machines subjected the parts to destructive tests, that the limit of durability might be ascertained, and the element of safety increased beyond any danger from shock or wear to which the finished car might be subjected in the most trying service. After the quality of parts had been proved, the completed units underwent rigorous working tests, such as a 200-hour non-stop run of the "38" motor, calling for continuous labor equivalent to propelling a loaded car up a six-and-a-half per cent grade at 35 miles an hour. At the end of this test, when the motor was taken down, and each part measured with delicate instruments, the wear was infinitesimal and the motor parts showed no appreciable deterioration.

Factory tests were multiplied until the first experimental cars were completed and turned over to Packard

Packard Standard Extension Cape Cart Top with Side Curtains and Packard Storm-Tilt Windshield





The 1913 Packard "38" Runabout

A SMALLER SIX-CYLINDER PACKARD

executives and engineers for the most arduous and important phase of the forework—the trial of the car under all sorts of cross-country touring conditions.

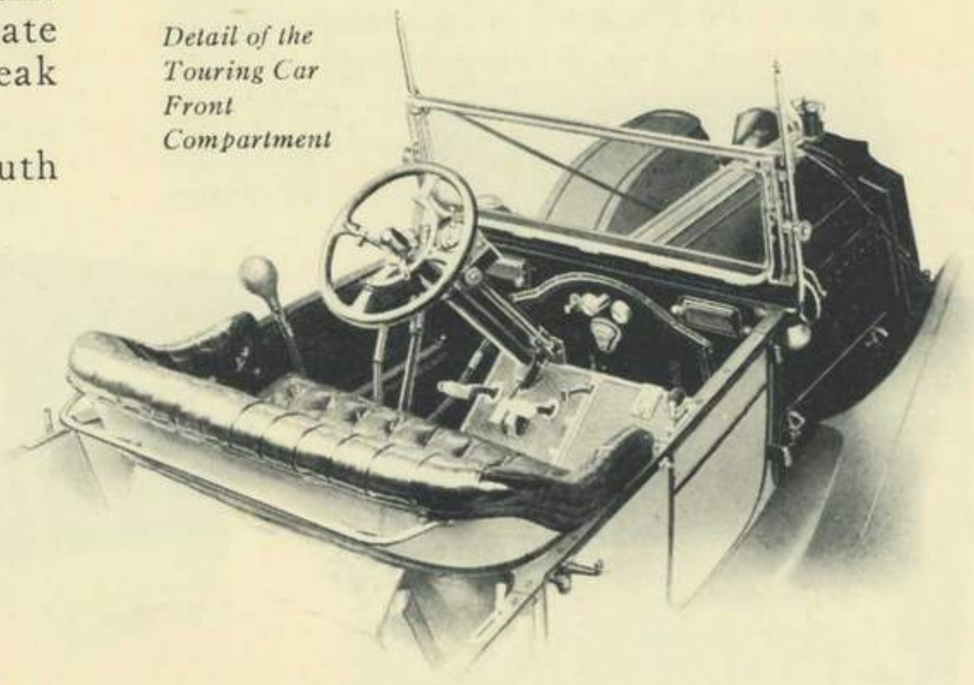
The "38" motor, disguised under a nondescript hood, was tried out by skillful testers for several weeks with scarcely an intermission, in a testing camp near Waynesboro, Georgia, during the winter of 1911-12. Critical drivers, working in relays, took the cars through mud and snow for thousands of miles, searching for details that could be improved. Deliberate and long attempts were made to break down the experimental cars.

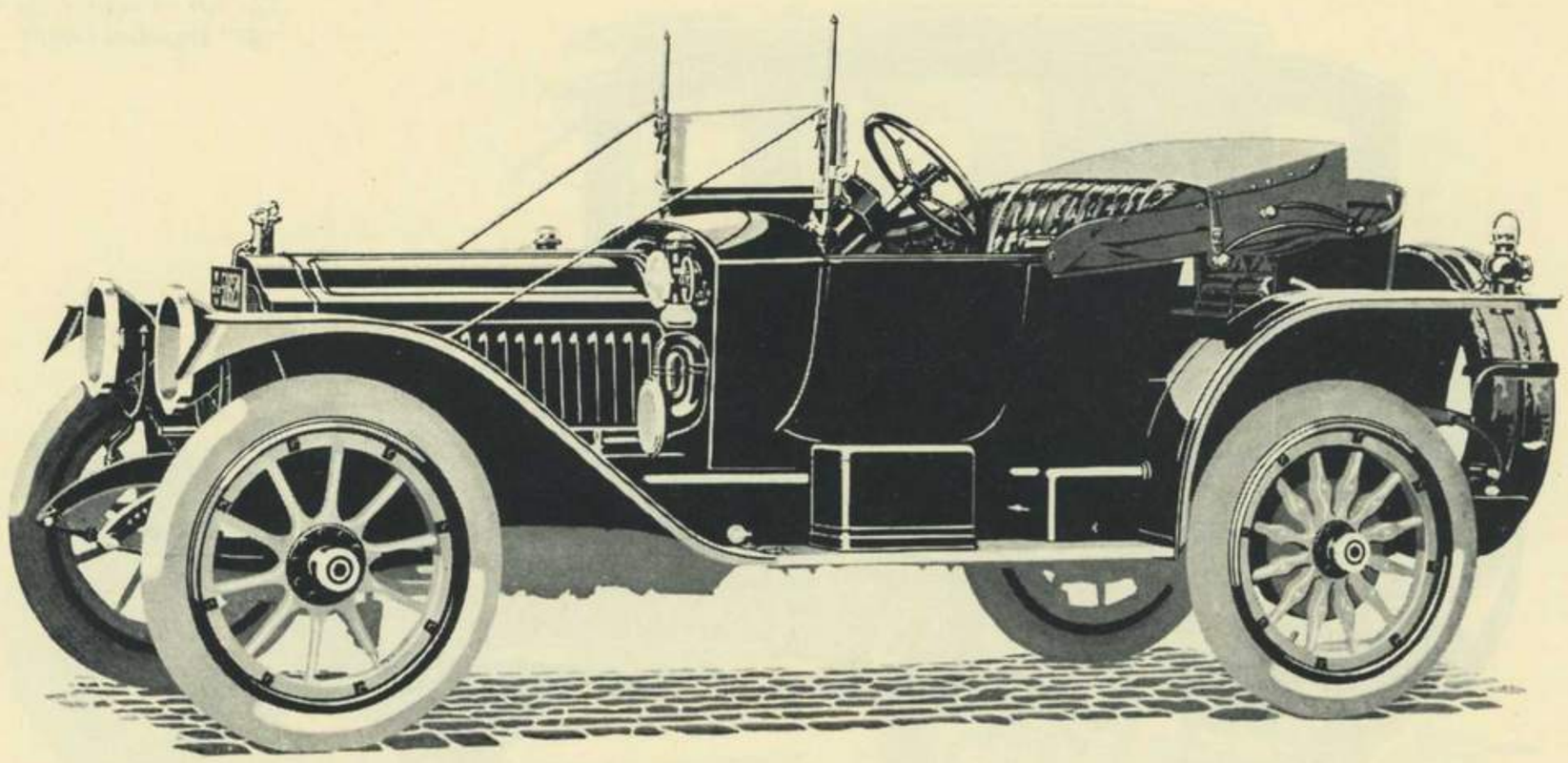
Over the roads of the North, South and West, in every kind of going, including deep sand, mud and steep grades, the first "Thirty-eights" were driven. By merciless usage alone is a car's stamina determined and the latest Packard received its full share of rigorous treatment before it emerged into permanent shape.

The problem then became one of manufacturing—to maintain the standard in every one of the finished cars. Inspection begins with the chemical analyses of metals and ends only when the car is shipped.

Forty kinds of steel are specified for use in the "38." In co-operation with the foundry, forge, machine shops and heat-treating plant, the Packard laboratory is constantly at work, guarding the quality of steel parts.

Detail of the Touring Car Front Compartment





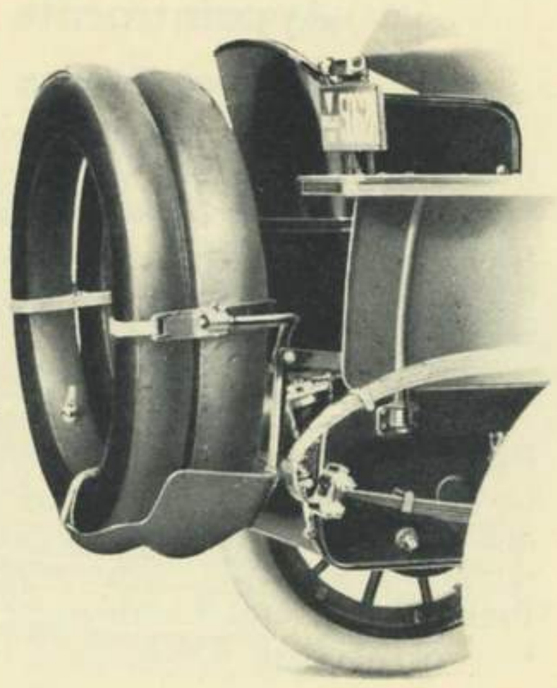
The 1913 Packard "38" Runabout

A SMALLER SIX-CYLINDER PACKARD

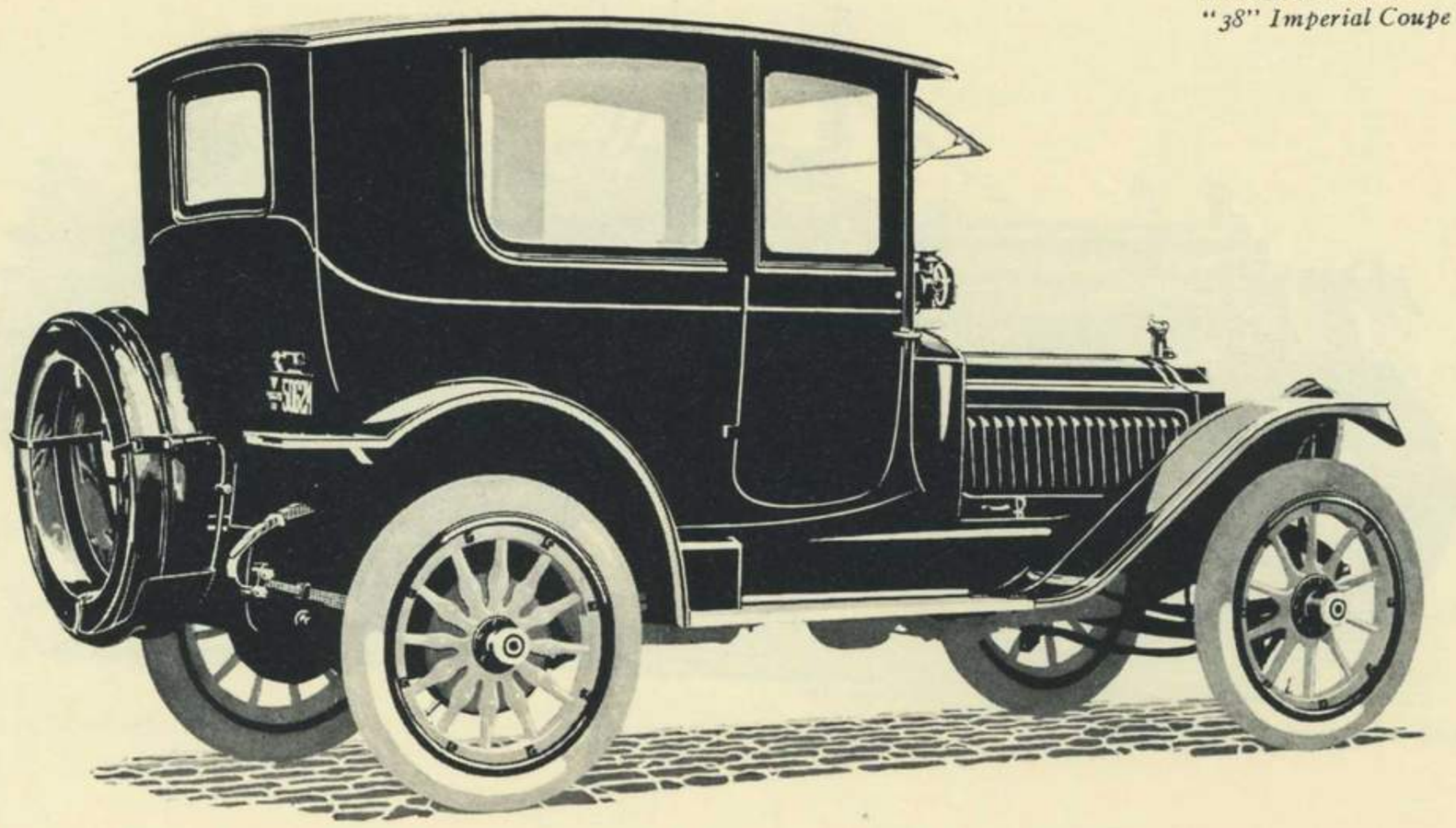
The "38," like all its predecessors, is strictly a Packard product. The raw materials are shaped by Packard craftsmen—seven thousand of them—in many instances with special Packard tools—and always under the vigilant supervision of Packard experts.

A coach-building establishment, employing hundreds of skilled craftsmen, is kept busy producing bodies which must conform to Packard requirements in the most minute particular. Packard carriage building comprehends every step in manufacture from the shaping of selected woods and sheet aluminum to the ultimate refinements of the finished body. Painting, trimming and upholstery all are carried on under the same conditions of exactitude.

The "38" line offers a wide range of open and enclosed bodies, including interchangeable styles. The three standard chassis are touring, phaeton and runabout. The limousine, imperial limousine and landaulet bodies are interchangeable on the touring chassis. The limousine or imperial limousine, with capacity of seven, including two drop seats, is an ideal family town car. The landaulet with the same seating capacity combines the advantages of an enclosed and an open car. The phaeton seats four or five, the additional four inches of chassis length enhancing the effect of luxury. The brougham, which fits the phaeton chassis, is an enclosed body of aristocratic design, seating four, exclusive of a drop seat. The runabout is a dis-



Special Packard Tire Carrier—Standard Equipment on Runabout and Coupe Models—Special Equipment on all Other Models



The 1913 Packard
"38" Imperial Coupe

A SMALLER SIX-CYLINDER PACKARD

tinctive type of more limited capacity for town and country use. The body is interchangeable with the coupe and imperial coupe, types eminently suited to the requirements of ladies.

Packard carriages are a logical result based on fifteen years of consistent progress in the art of producing motor vehicles exclusively of the highest type.

Appointments

Standard Painting

Open cars—Body and door panels, Packard Blue, striped with cream-yellow. Under-body, body front, bonnet, radiator, frame, fenders, splashers, moldings and all running gear parts except wheels, black, not striped. Wheels, cream-yellow, striped with black. All visible wood parts, except wheels, black rubbed finish.

Enclosed cars—Body and door panels, Packard Blue, striped with black. Upper-body, under-body, fenders, moldings, frame, bonnet, radiator, body front and all running gear parts, except wheels, black, not striped. Wheels, Packard Blue, striped with black. All visible wood parts, except wheels, black rubbed finish.

Special Painting

No Extra Charge

Provided standard method of application and standard design of striping is followed.

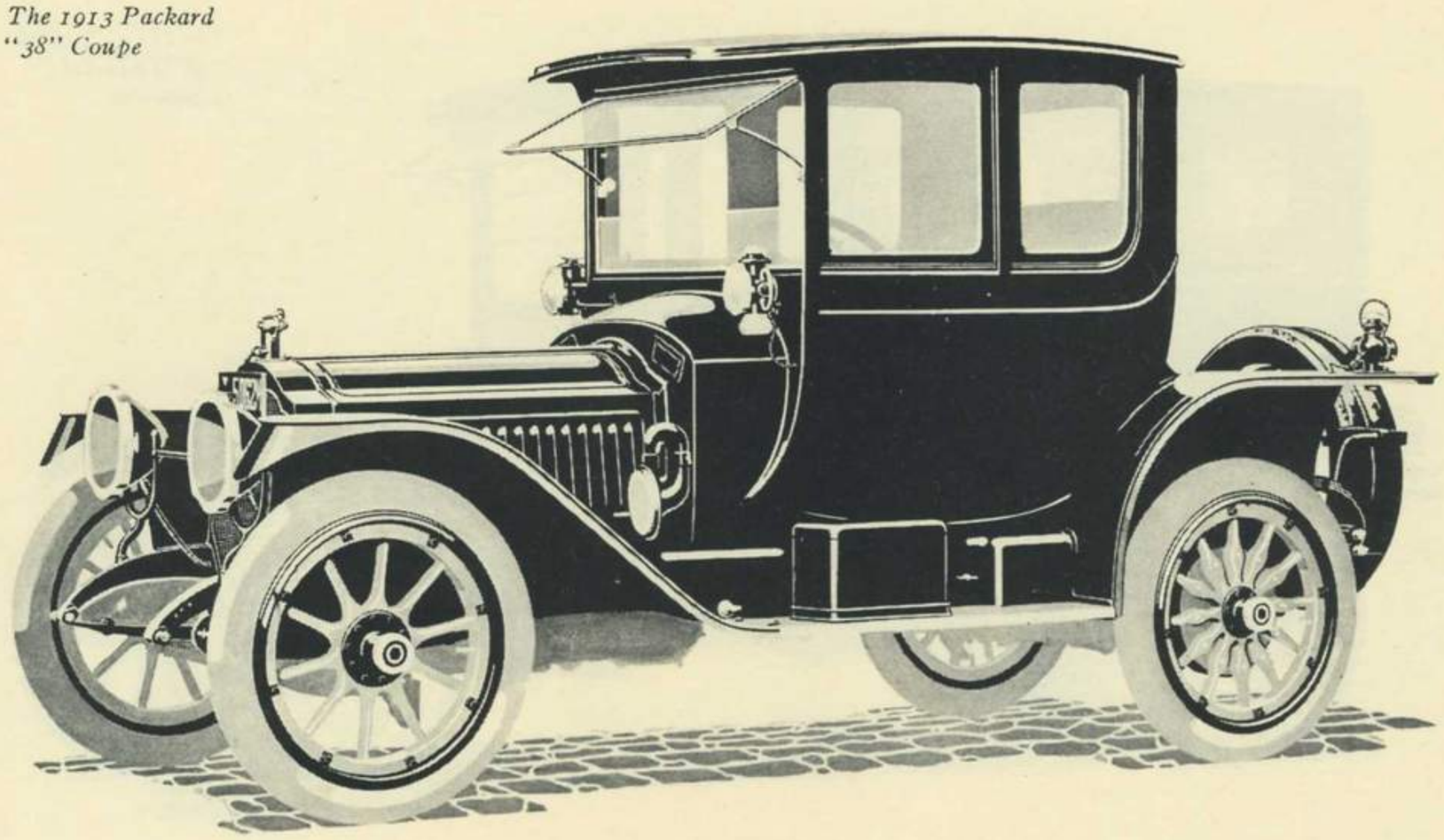
Standard Trimming

Open cars—Seats, black, hand-buffed, straight grain leather, tufted. Running boards and front floor and heelboards, cork-carpeted. Fibre mat in tonneau. All bright metal parts, nickel plated.

Enclosed bodies—Front seat, black, hand-buffed, straight grain leather, plain. Floor and

Steering Knuckle and Connections

The 1913 Packard
"38" Coupe



A SMALLER SIX-CYLINDER PACKARD

heelboards, cork-carpeted. Rear compartment, roof and above belt, special Packard gray cloth, plain. Below belt, special Packard gray cloth, plain, except seat and cushions, which are tufted. Floor and up to level of seatboards, gray-carpeted. All external bright metal parts and foot-rest, nickel plated. All interior bright metal parts, except foot-rest, silver plated. Sterling silver mounted toilet articles.

Special Trimming

Packard dealers are provided with samples of specially imported and exclusive Packard upholstering materials.

Trimming enclosed bodies in standard methods in any of the materials shown on the 1913 sample cards ---------- No extra charge

Upholstering touring car or phaeton in special color leather ---------- $25.00

Upholstering runabout in special color leather ---------- $10.00

Standard Car Equipment

Electric starter and acetylene priming device. Packard control board on steering column. Packard extension cape cart top with side curtains and envelope, on touring cars and phaetons. Runabout equipped with Victoria top, curtains and envelope. No shifting rail.

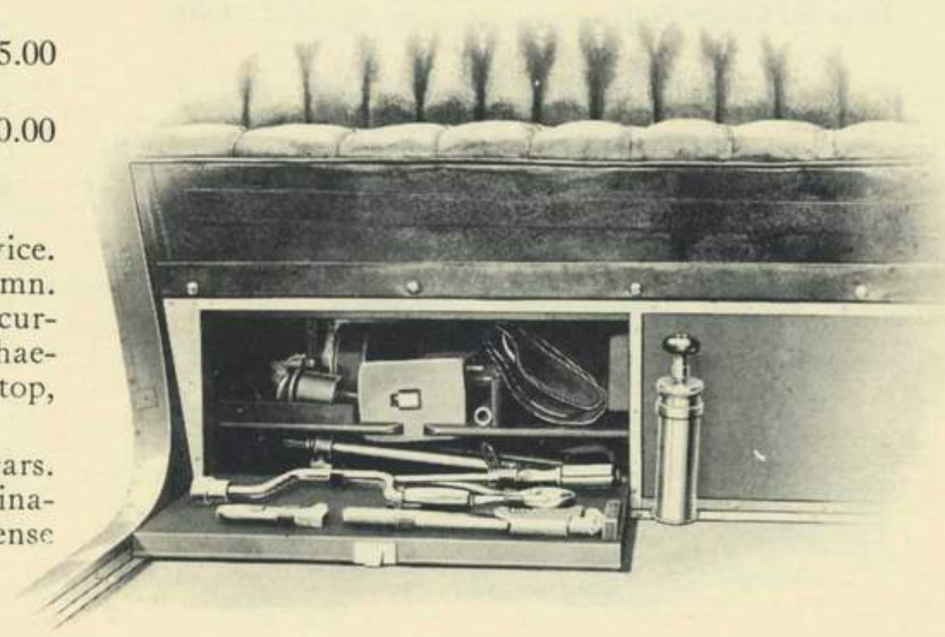
Packard storm-tilt windshield on all open cars. Packard electric headlights, Packard combination oil-electric side and rear lamps, and license tag illuminator with generator and battery. Bulb horn, complete set of tools, with tire repair and rim changing equipment. Two extra demountable rims. One-ton jack.

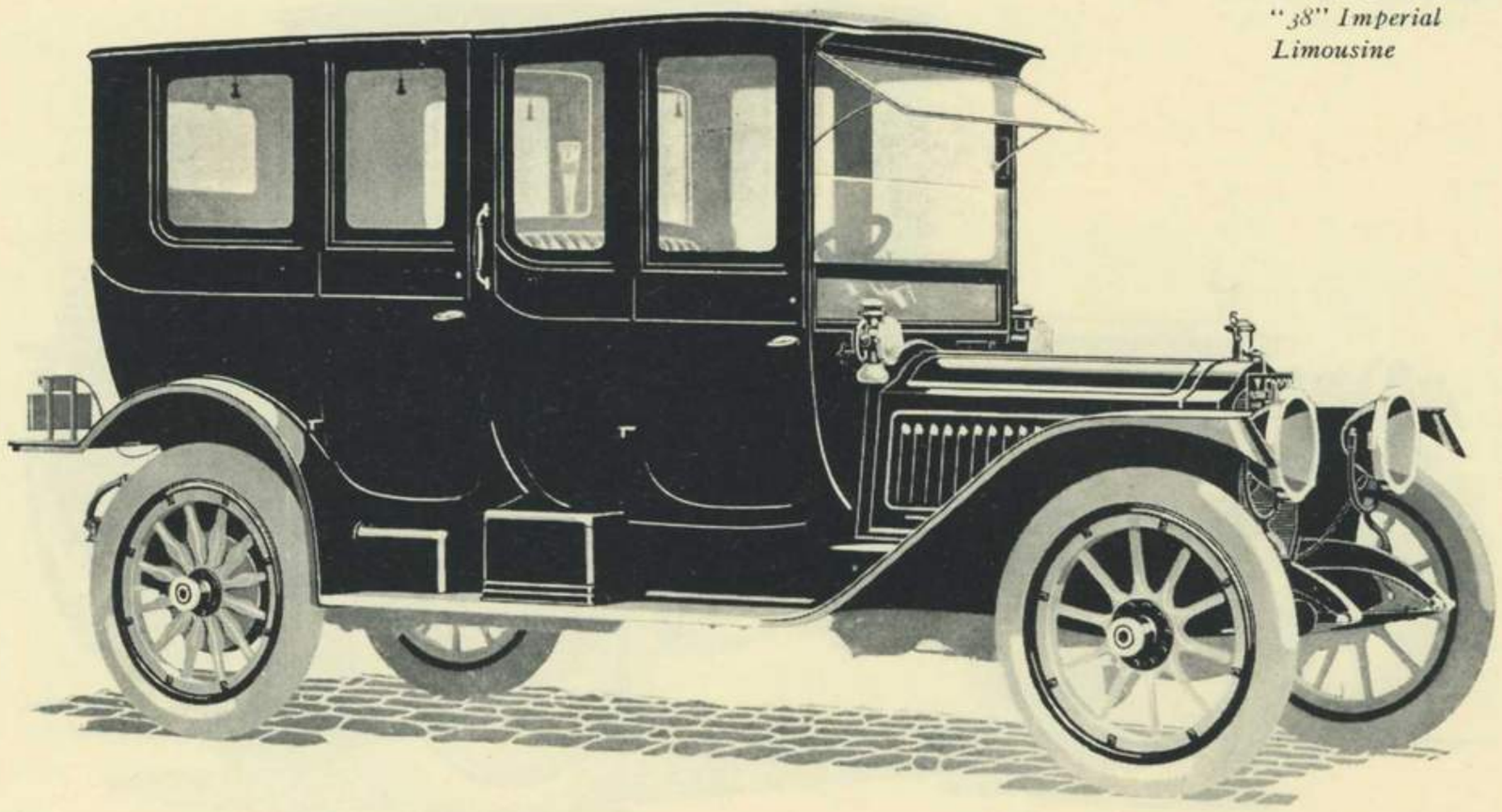
Enclosed Body Equipment

All enclosed bodies–dome lights and switches. Extra seats on all 7-passenger bodies—drop seats facing to the rear.

Two compartment enclosed bodies—Push buttons and buzzers. Speaking tube. Folding foot-rail. Hat and parcel carrier. Toilet case and smoking set.

Tool Box and Emergency Tool Kit
Under Front Seat





The 1913 Packard "38" Imperial Limousine

A SMALLER SIX-CYLINDER PACKARD — CONCLUDED

Packard "38" Carriages

In Standard Finish and Equipment

Touring Car, seats five	**$4,150**
Phaeton, seats five	**4,150**
Phaeton, seats four	**4,150**
Runabout, seats three	**4,050**
Limousine, seats seven	**5,200**
Landaulet, seats seven	**5,300**
Imperial Limousine, seats seven	**5,400**
Brougham, seats five	**5,200**
Coupe, seats three	**4,500**
Imperial Coupe, seats four	**4,900**
Touring, Phaeton or Runabout Chassis	**3,500**

Packard "38" Enclosed Bodies

Limousine Body	$1,700
Landaulet Body	1,800
Imperial Limousine Body	1,900
Brougham Body	1,700
Coupe Body	1,000
Imperial Coupe Body	1,400

Packard "38" Open Bodies

Without Tops or Windshields

Touring Car Body	$650
Phaeton Body (four or five-passenger)	650
Runabout Body	550

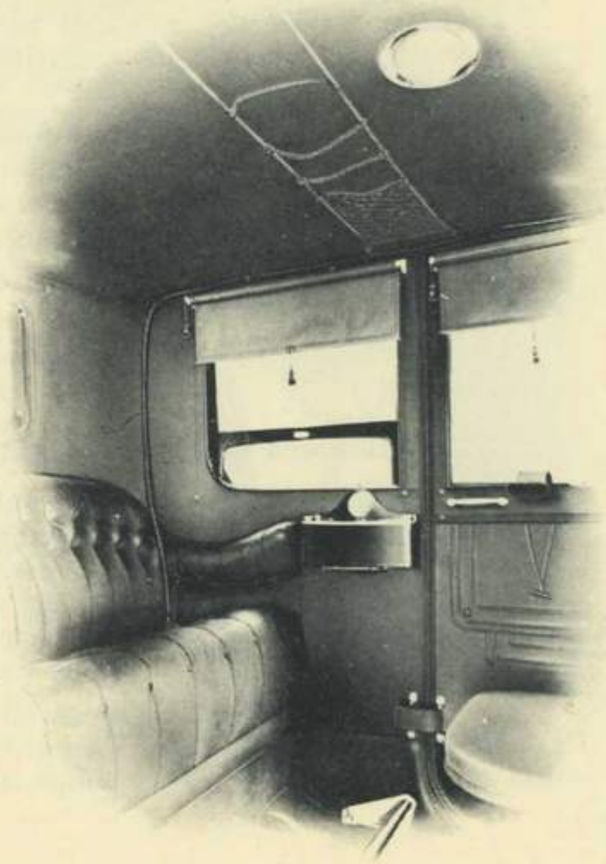
Packard "38" Tops

Extension Cape Cart Top for Touring Car or Phaeton	$175
Runabout Victoria Top	135
Leather Victoria Top for Touring Car	290
Leather Victoria Top for Phaeton	290
Full Glass Canopy Top for Touring Car	625
Full Glass Canopy Top for Phaeton	625
Packard Storm-Tilt Windshield	75

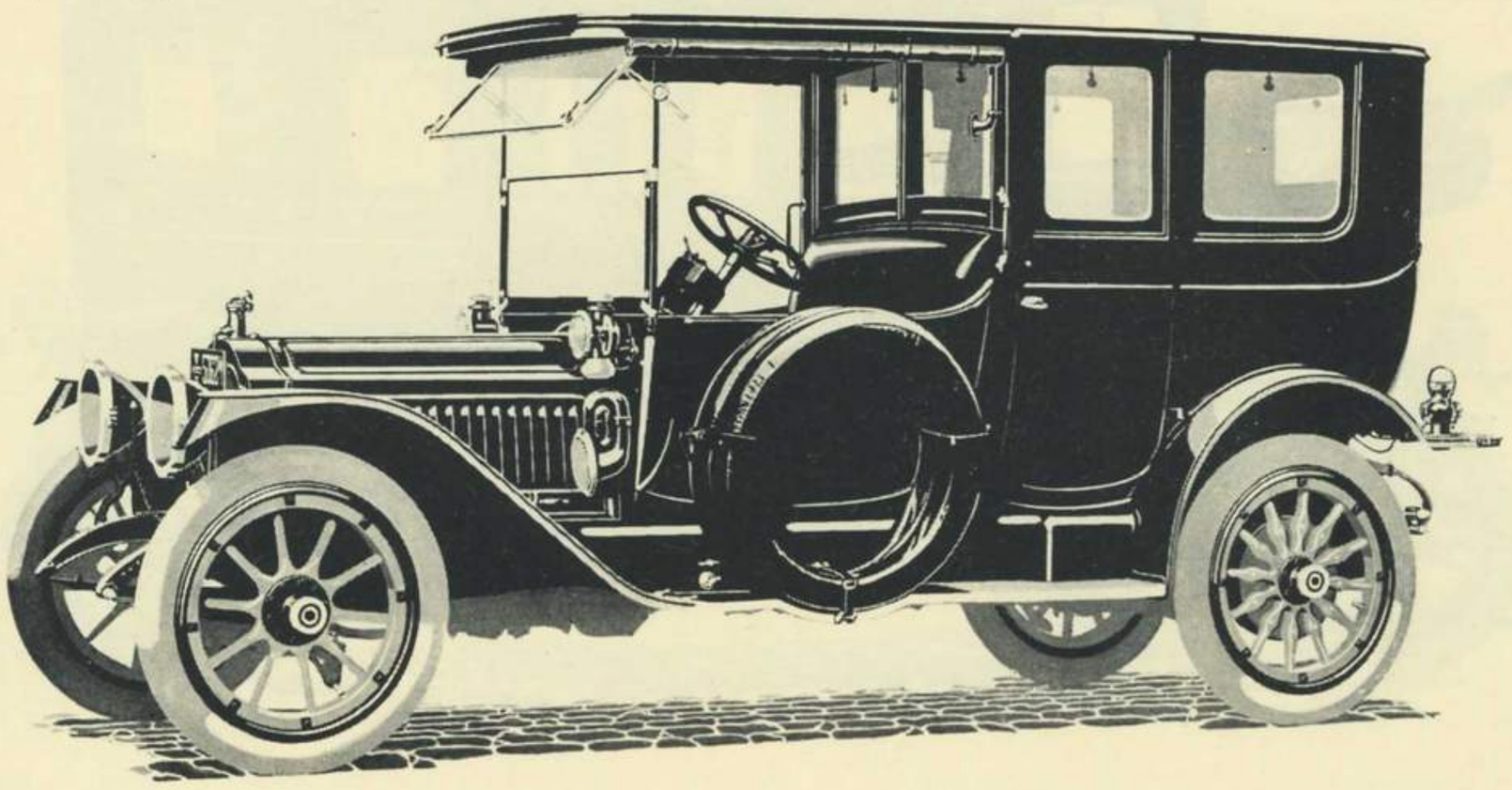
Appurtenances

Seat Covers for Touring Car Body	$65.00
For Phaeton Body	65.00
For Runabout Body	35.00
Trunk Rack	12.00

Rear Compartment of '38" Limousine or Imperial Limousine



The 1913 Packard
"38" Limousine



SPECIFICATIONS—1913 PACKARD "38"

Principle

TWO units, the motor unit, comprising the motor and clutch, and the rear axle unit, comprising the transmission, final drive and differential gears. A rigid extension of the crank case houses the clutch and supports the clutch bearings.

Horsepower

Six vertical, water-cooled cylinders. Bore, 4 inches. Stroke, 5½ inches.

Horsepower rating of Packard "38" by the A. L. A. M. formula (an arbitrary calculation based on average horsepower developed by a large number of different makes of motors at a piston speed of 1000 feet per minute), with muffler off_____38

Actual brake horsepower of Packard "38" motor at same piston speed (which equals 1090 R. P. M.), with muffler on_48

Maximum horsepower of Packard "38" motor (obtained at 1720 R. P. M., or 1576 feet piston speed), with muffler on_____60

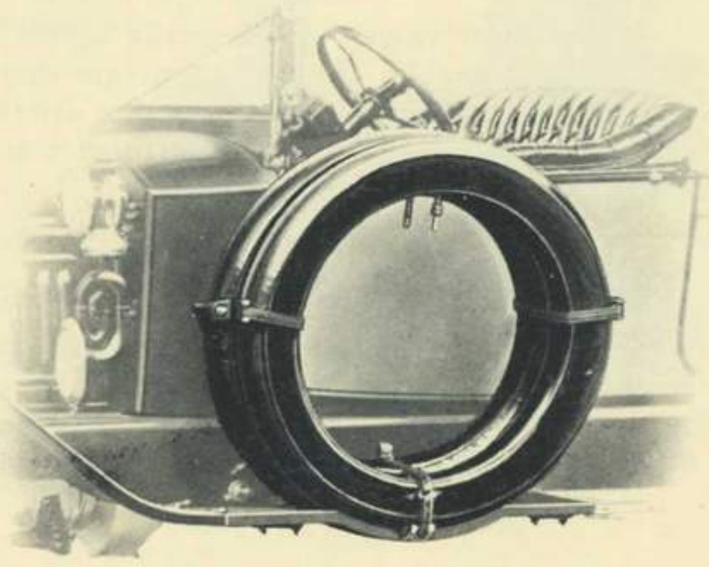
Wheel Base

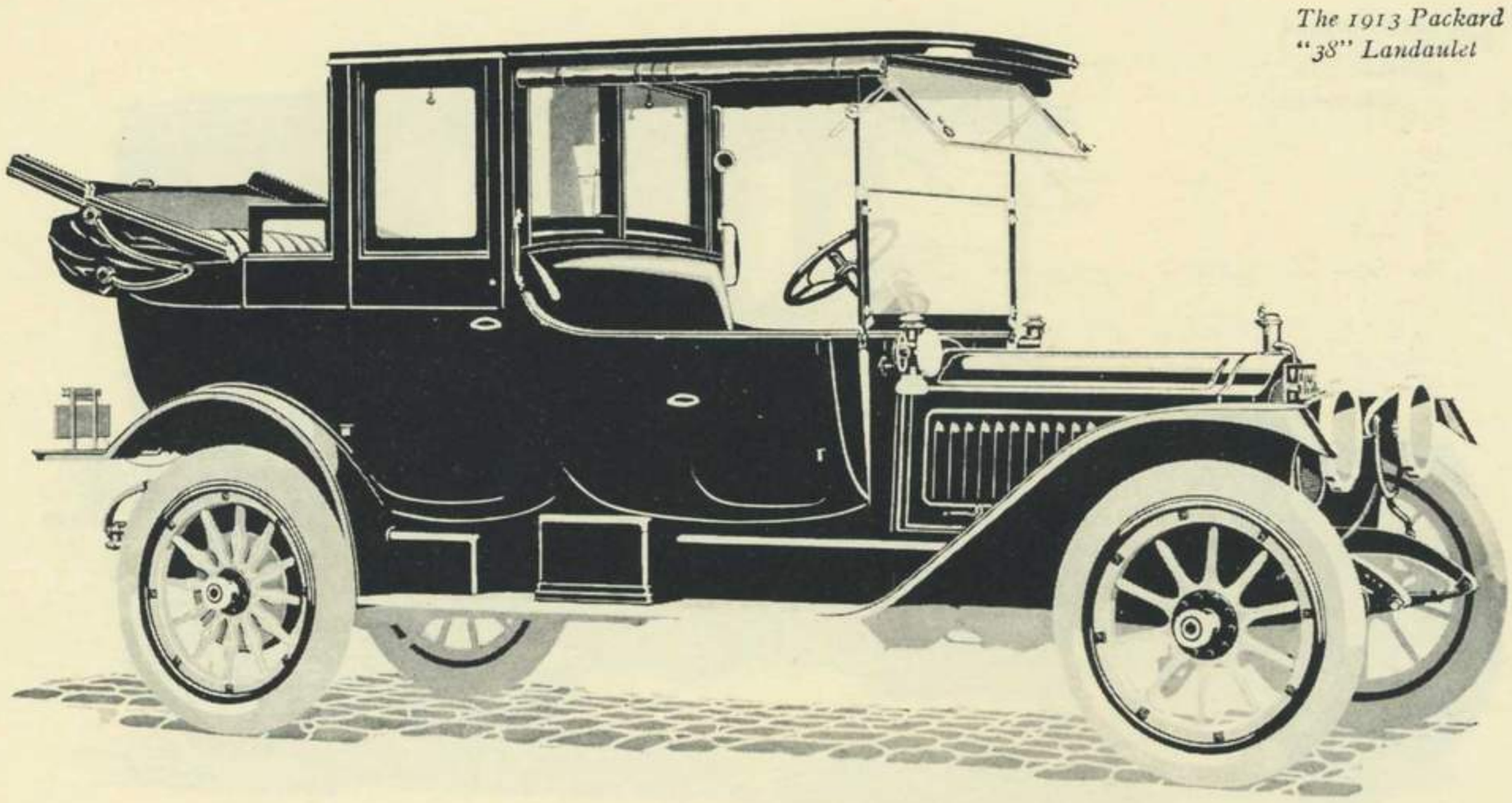
Touring chassis, 134 inches; Phaeton chassis, 138 inches; Runabout chassis, 115½ inches; Tread, 56 inches. Car turns in a circle 41½ feet in diameter.

Tires

Goodrich or Diamond tires standard. Front, 36 by 4½ inches; rear, 37 by 5 inches. Firestone quick detachable demountable rims or Continental quick detachable demountable rims, standard.

Standard Method for Carrying Extra Tires on all Models Except Runabout and Coupe





The 1913 Packard "38" Landaulet

SPECIFICATIONS—1913 PACKARD "38"—CONTINUED

The Motor

Cylinders

The cylinders are L-head type, cast in pairs with integral water jackets and valve chambers. Valves are all on the right side, operated from single cam shaft. Valves completely enclosed by easily detachable stamped aluminum covers, held in position by spring clamps. Pistons are fitted with two ground rings, both above piston pin.

Crank Shaft

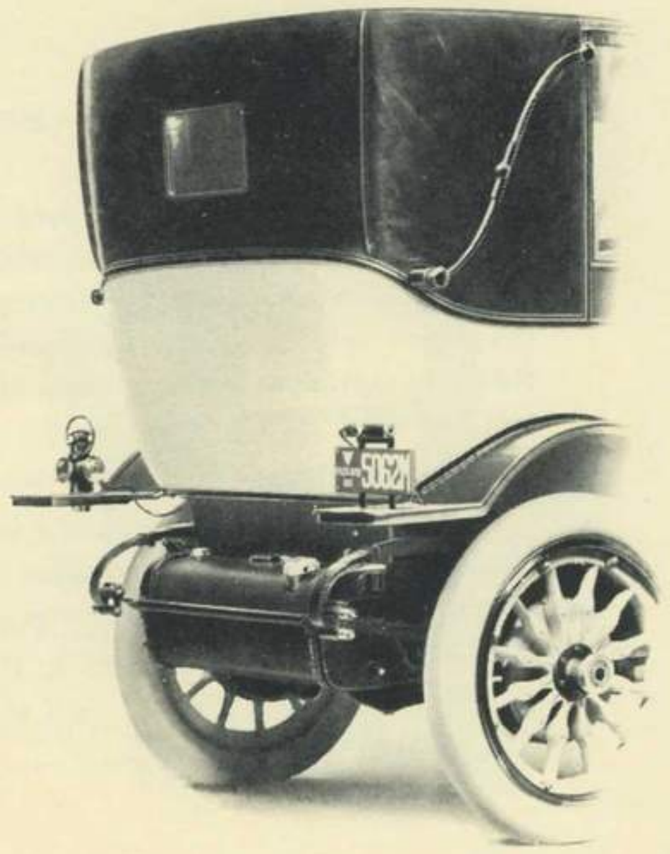
Crank shaft is of heavy construction. It is supported by large main bearings, carried by the upper section of crank case. Oil ducts through crank shaft distribute oil to connecting rod bearings and piston pins. Connecting rods drop forged.

Valves

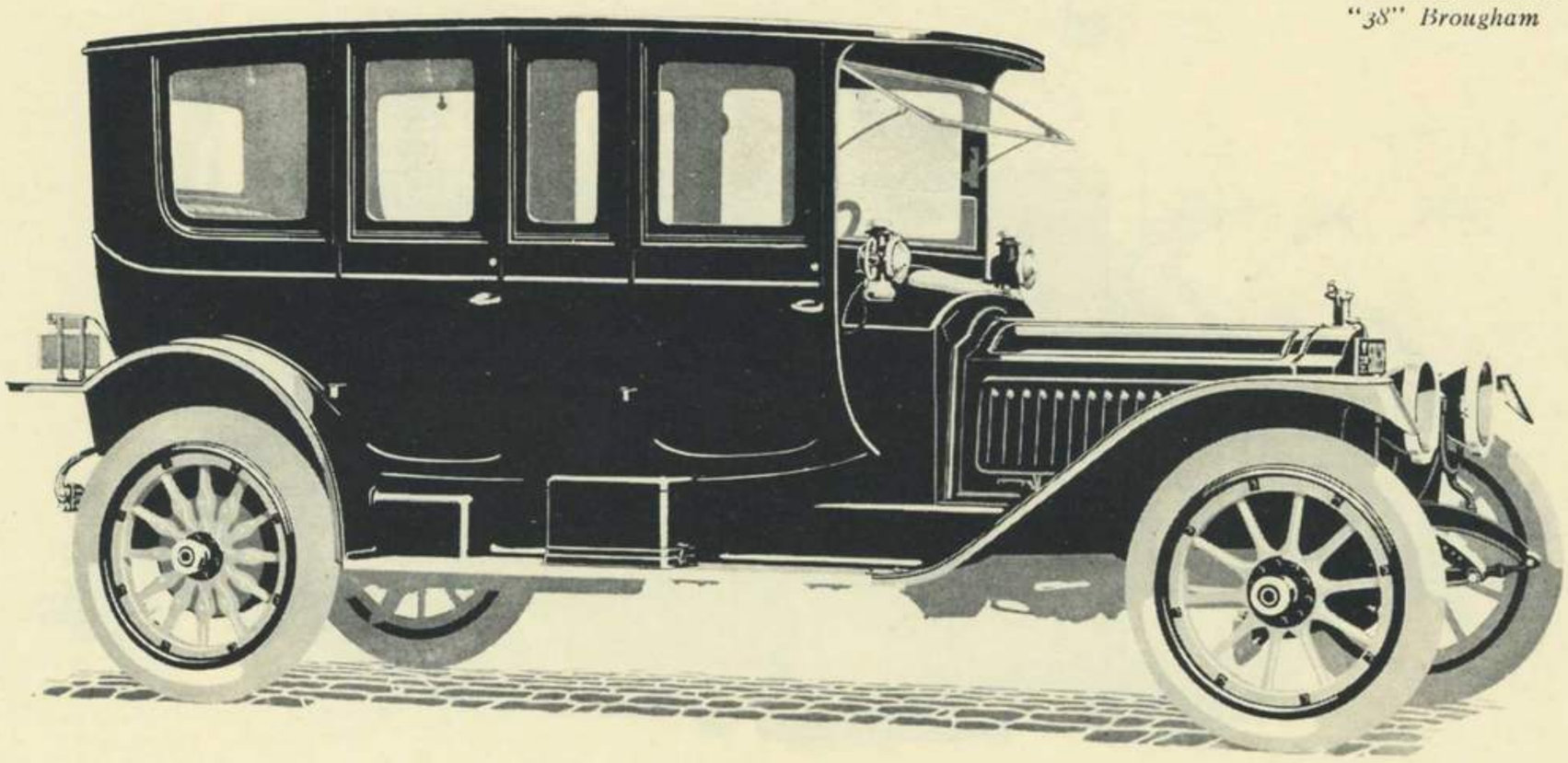
Nickel steel valves, mechanically operated and interchangeable. Motor gears, cam shaft, magneto, generator and water pump driving gears contained in forward extension of crank case and positively lubricated.

Crank Case

Composed of two horizontal sections. Upper section, supported by main frame, forms the engine base. A rearward extension of upper section, with covers, forms clutch housing and supports rear clutch shaft, clutch shifter and clutch pedal bearings. Lower section of crank case is an oil reservoir, on the bottom of which is the oil pump and strainer. Oil pump driven by worm gear on cam shaft. Oil pump and strainers are easily removable for inspection and cleaning. Lower section removable for inspection and adjustment without disturbing crank shaft bearings. Crank case cast of special aluminum alloy, in Packard foundry. Crank case rigidly supported at rear on the main frame and at front on a bearing in the center of a heavy



Rounded Corner of Landaulet



The 1913 Packard "38" Brougham

SPECIFICATIONS—1913 PACKARD "38"—CONTINUED

drop-forged beam across frame. This three-point suspension prevents twisting strains in crank case.

Carburetor

Exclusively Packard in design and manufacture, combining float feed, a large cylindrical mixing chamber directly above the aspirating nozzle and automatic mixture regulation for all motor speeds. Auxiliary air inlet attachment is automatically regulated by a spring-controlled poppet valve. The adjustment of spring tension of the poppet valve, giving proper mixture for starting or to suit different atmospheric conditions, and the adjustment of the primary air intake shutter to assist starting in cold weather are operated by handwheel on the control board. Heated air drawn from around the exterior of the exhaust manifold and a hot water jacketed mixing chamber insure an efficient mixture.

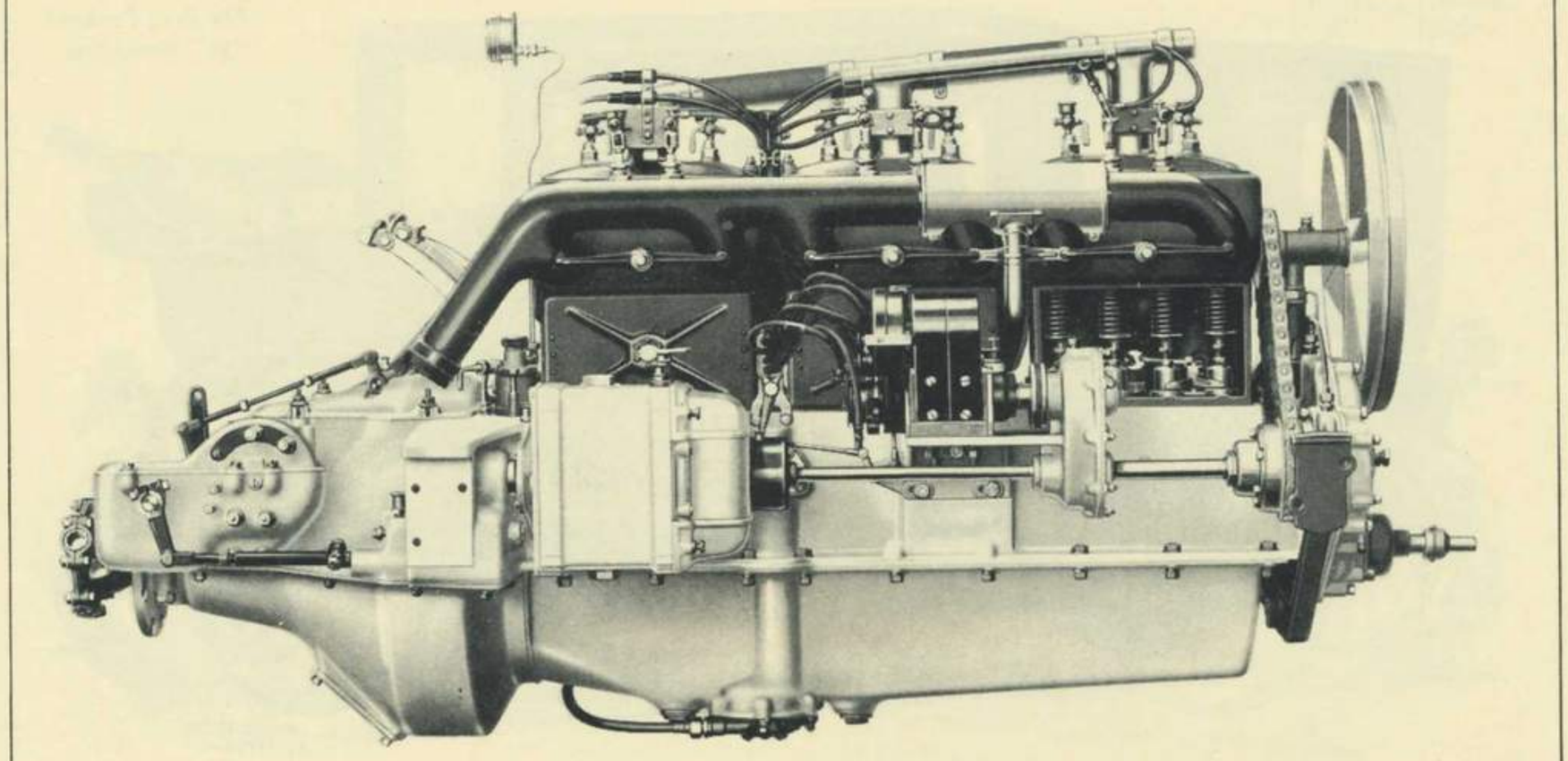
Gasoline Supply

The gasoline supply is by pressure. Gasoline is carried in a heavy gauge tinned steel tank on rear of chassis, upper edges and joints protected by frame channel. Constant pressure maintained by automatic pressure pump on motor, with large hand pump on front seat heelboard for initial pressure. A gauge on dashboard connected directly with gasoline tank shows exact pressure in tank. Magnetic gauge on top of tank indicates supply of gasoline in tank. Capacity of tanks for all types, twenty gallons.

Lubrication

Gear pump supplies oil under pressure to crank shaft, connecting rod, piston pin and motor gear bearings. Intermediate cam shaft

Rear Compartment of Packard "38" Brougham

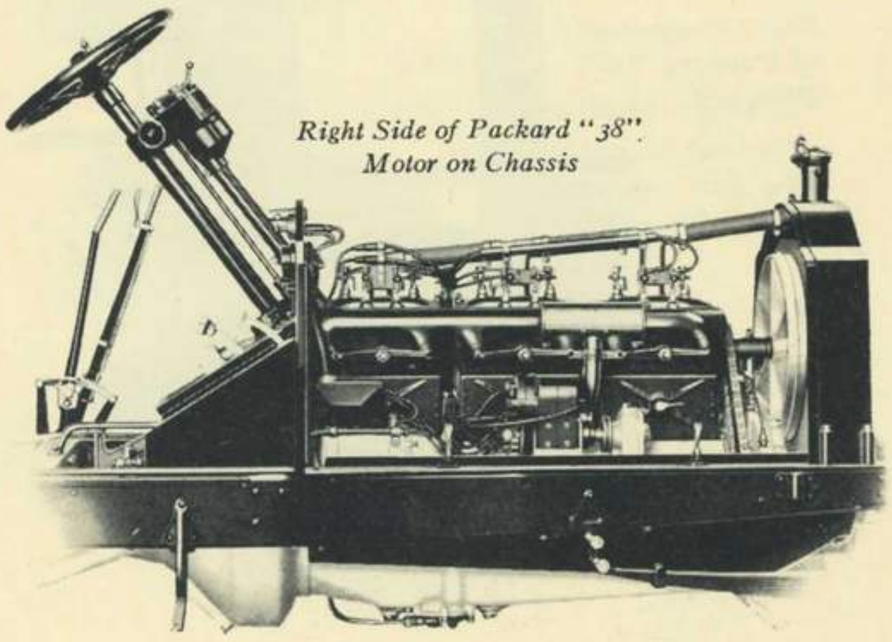


Right Side of 1913 Packard "38" Motor, Showing Motor-Generator and Method of Enclosing Valves

SPECIFICATIONS—1913 PACKARD "38"—CONTINUED

bearings and other motor parts in the crank case are oiled by spray from the lower connecting rod bearings. Baffle plates limit the amount of spray for cylinder walls to amount necessary for light running. When motor is under heavy load, the auxiliary system provides for increased oil requirements of the cylinders. The auxiliary system is governed directly by throttle control (not by speed of motor), and the amount of oil supplied varies with the throttle opening. Oil enters through the cylinder walls on the right side where the oil is most needed, giving direct lubrication to cylinders and pistons.

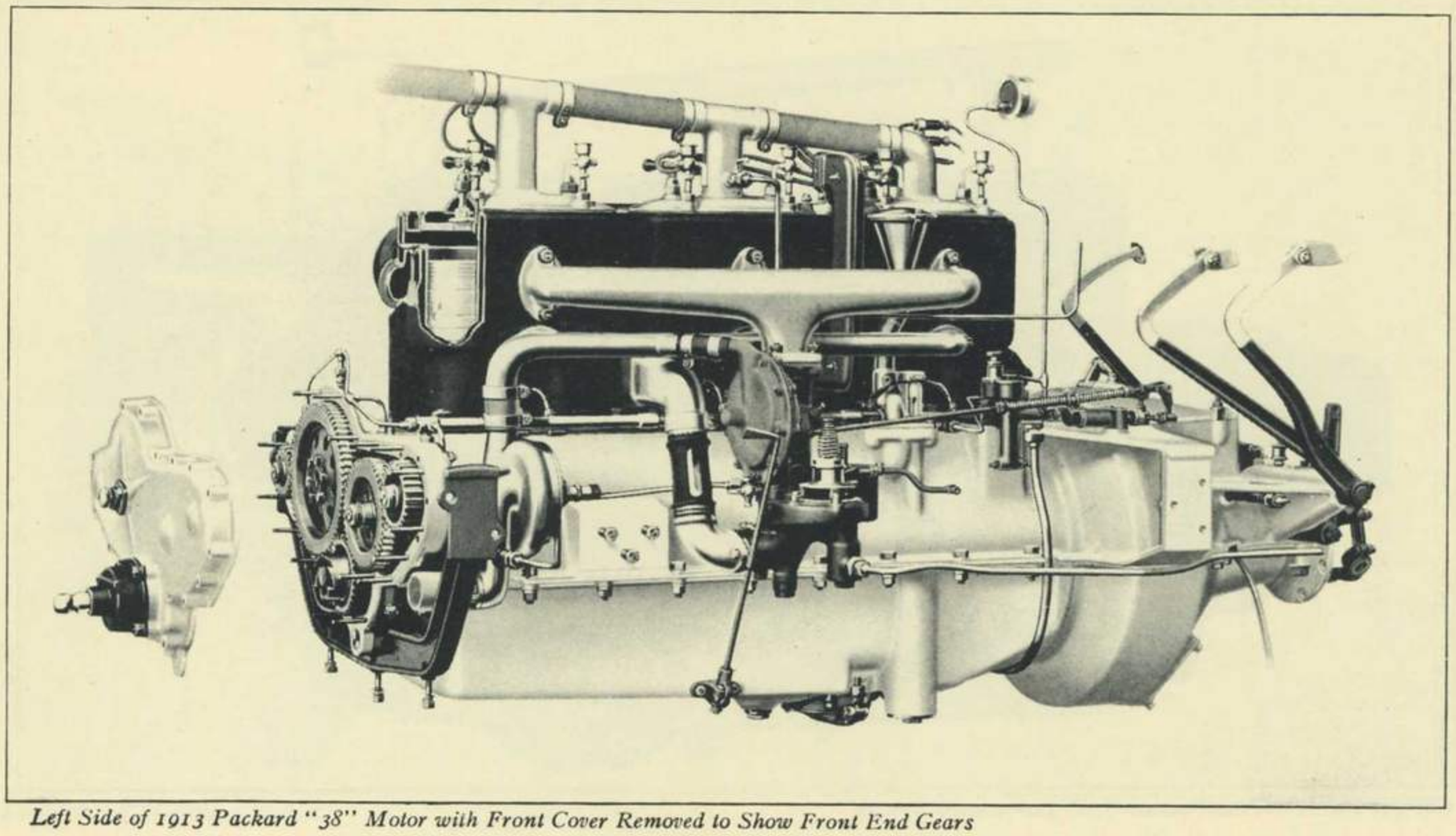
Oil pump is driven by worm gear on cam shaft. A gauge on dashboard, connected directly with oiling system, shows exact pressure. Oil reservoir formed by lower section of crank case, bottom of which slopes from both ends toward strainer and oil pump. Sediment pockets with drain plugs are in front and rear of strainer. Pump and strainer easily removable. Normal capacity of crank case, one gallon. The level of oil in crank case, when below pet cock outlet, is indicated within the gauge glass on left side of motor. When the pet cock is open, the handle extends out in such a way as to prevent latching of hood. This warning insures closing of the pet cock. Transmission and differential run in oil. Rear universal joint encased and packed in grease. Forward joint encased and runs in oil. Other running and wearing parts provided with grease or oil cups.



Right Side of Packard "38" Motor on Chassis

Motor Control

Speed of motor regulated by hand lever on steering wheel and by foot accelerator, both acting directly on the throttle. A hydraulic governor is used to steady motor running and compensate for varying loads within limits of throttle setting, by hand lever. The governor is incorporated in the water circulation system, but is included in the carburetor unit. Ignition spark is advanced or retarded for most efficient ignition under every running condition by small lever on steering wheel.



Left Side of 1913 Packard "38" Motor with Front Cover Removed to Show Front End Gears

SPECIFICATIONS—1913 PACKARD "38"—CONTINUED

Centralized Control

Exclusively Packard in design, eliminating controls from the dash. Places control of starting, lighting, ignition and adjustment of gasoline mixture on steering column within convenient reach of the driver's hand. All wires leading to control board are protected by a metal tube.

Primer

Acetylene priming device is attached to inlet manifold to assist starting in extremely cold weather. Button conveniently located on dash within easy reach of driver's foot.

Motor Cooling

Positive water circulation through cellular radiator and motor cylinder water jackets by centrifugal pump on left side of motor, driven by enclosed gears. Belt-driven fan with adjustment for belt tension is located behind the radiator. Capacity of water circulation system, six and one-half gallons.

Clutch

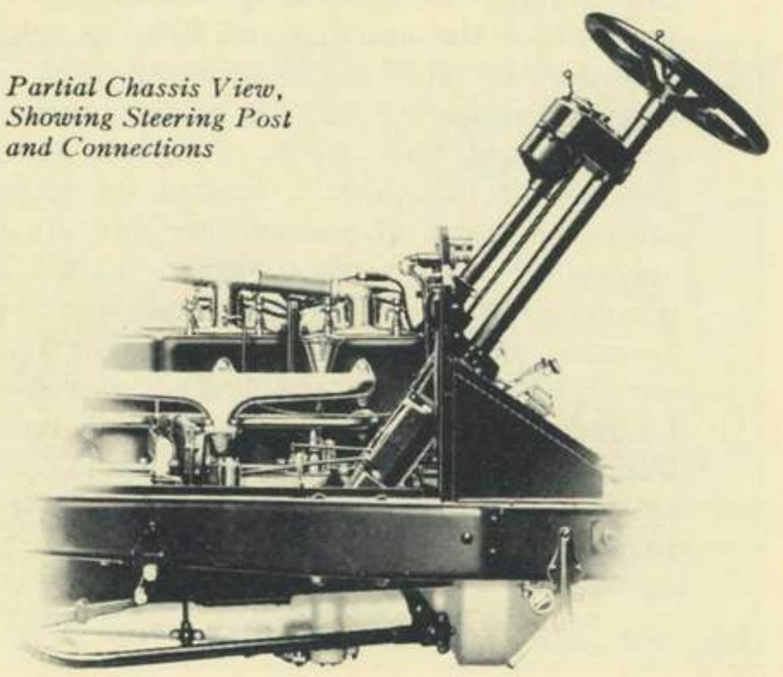
Packard dry plate, operated by left pedal, engages gradually with delicate, positive action at all times. The clutch being free from oil is not affected by weather conditions. Casing plates faced with special friction material. Shaft plates metal with ground faces. Clutch brake attached to clutch pedal to aid gear shifting. Clutch rear bearing supported by integral extension of crank case, which with its covers, completely encloses clutch. Clutch may be removed without disturbing universal joints.

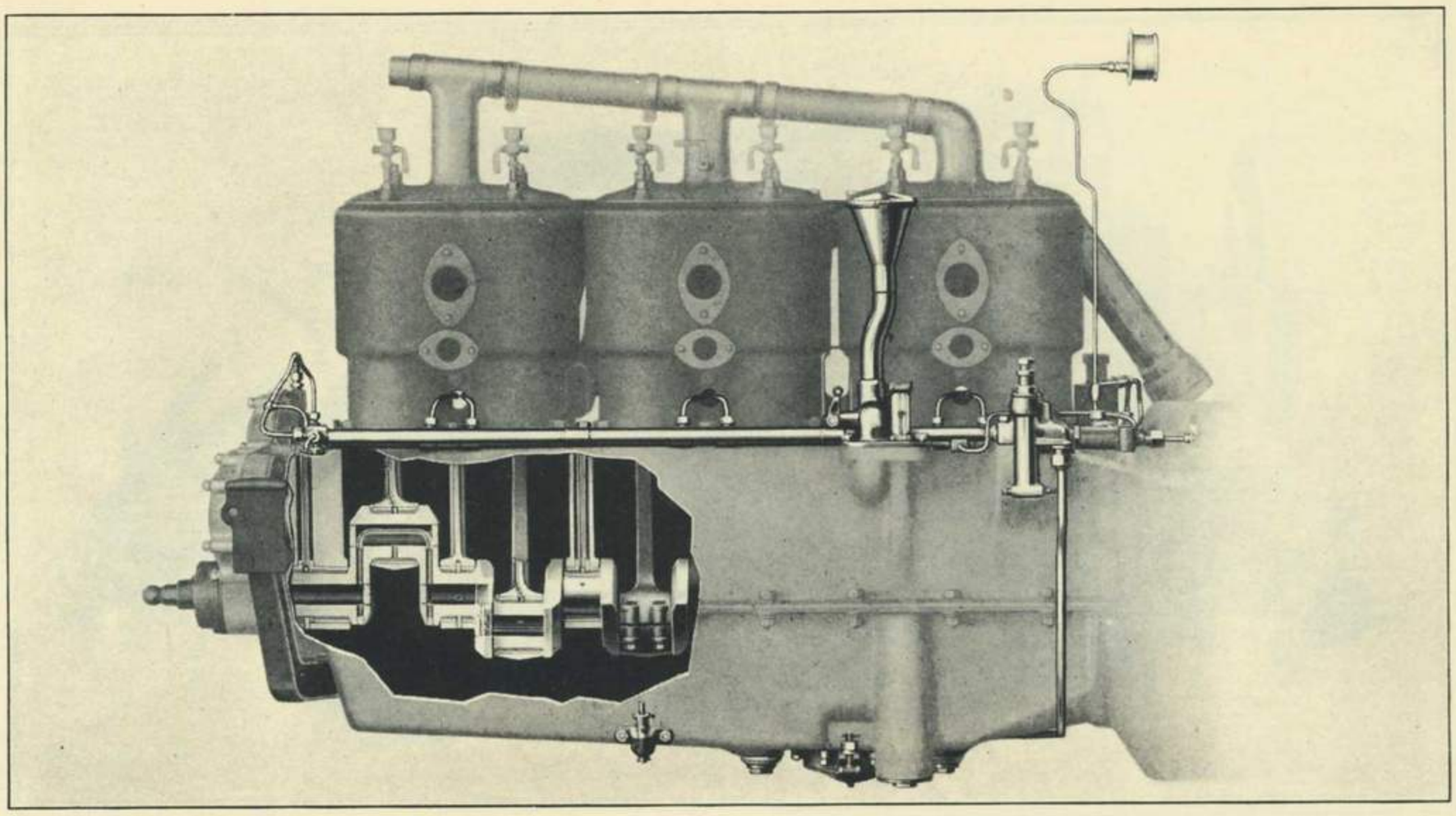
Starting, Lighting and Ignition Systems

Starting

By electric starting device. Operated by push button in control board on steering column and by starting pedal.

Partial Chassis View, Showing Steering Post and Connections





Cut-Out View Showing Packard "38" Lubrication System

SPECIFICATIONS—1913 PACKARD "38"—CONTINUED

Lighting

From storage battery when motor is idling or not running, and from generator after motor has attained a speed of approximately two hundred revolutions per minute. Battery and regulator located on the right running board. All switch controls located in control board on steering column.

Ignition

Jump spark by Bosch dual system. Current supplied by Bosch high tension magneto. A separate storage battery for starting and reserve, thus making the ignition system entirely independent of the starting and lighting systems. Transformer coil for magneto current is on armature. Transformer coil for battery current in control board with switch. Magneto and battery circuit interrupters, located on magneto, are independent of one another and are both operated by magneto armature shaft. High tension circuits and spark plugs common to both systems. Magneto situated on right side of motor. Switch, with suitable lock, conveniently located in control board on steering column. Coil button has bayonet lock, giving single spark in running position or stream of sparks to facilitate starting.

Transmission

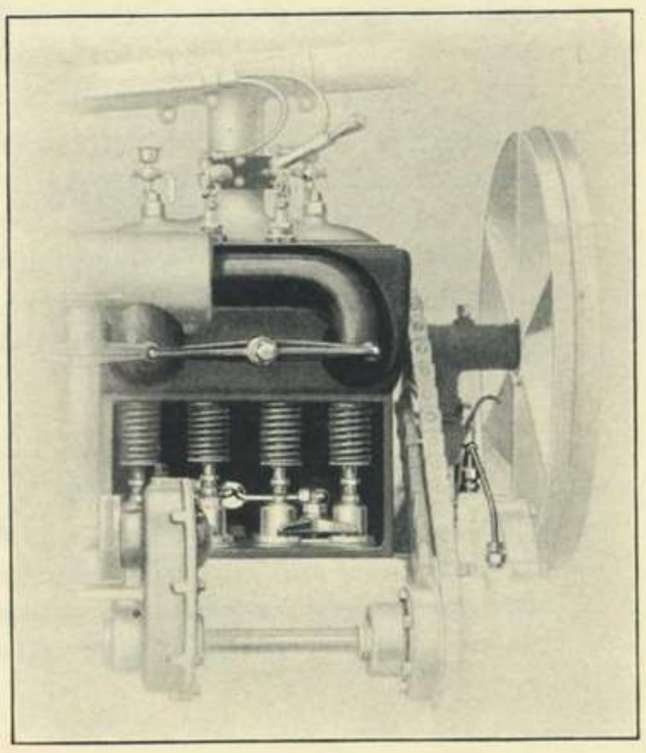
Transmission Unit

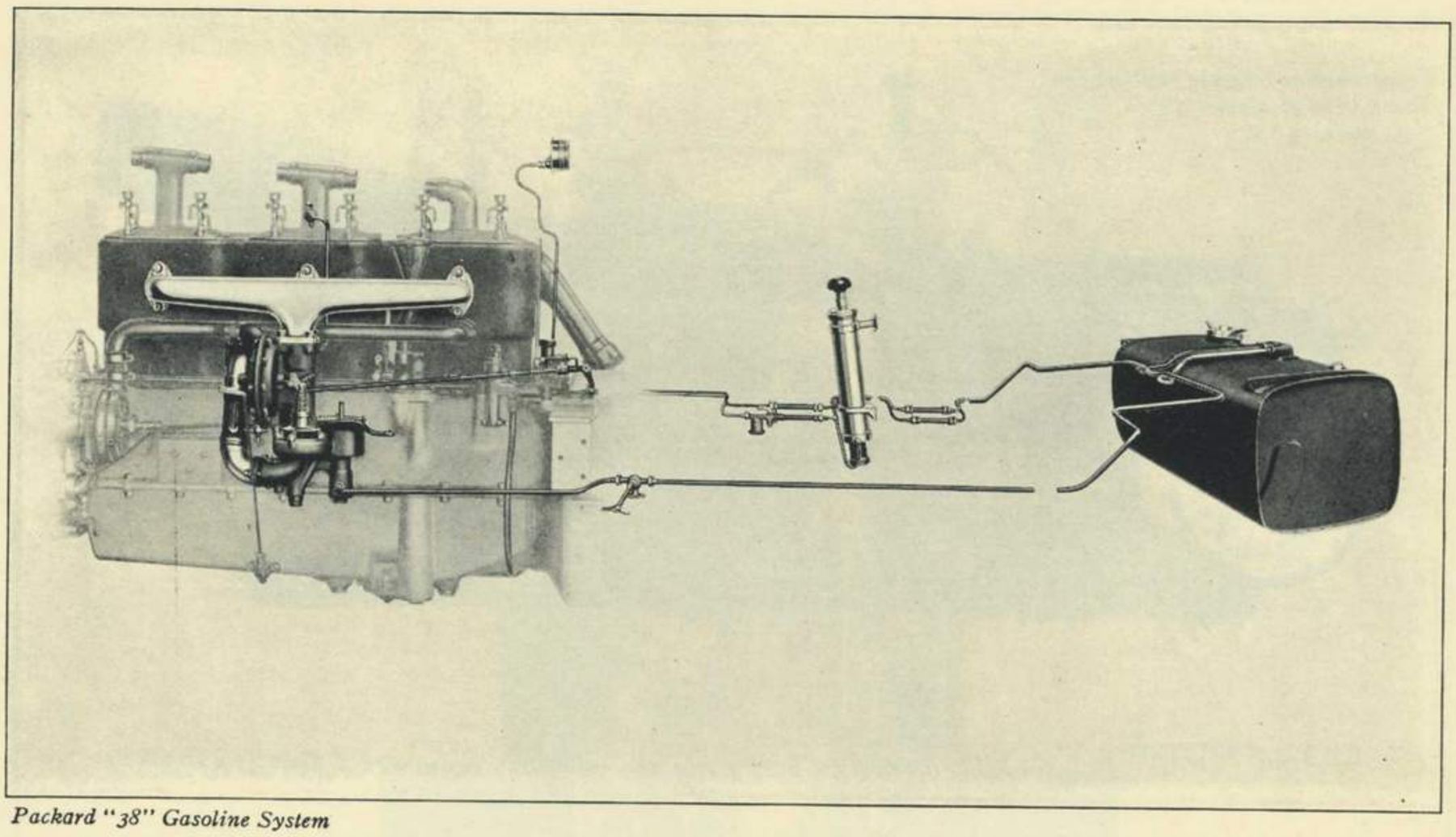
Speed changing, final drive and differential gears contained in a rigid unit on rear axle. Effectively encased universal joints.

Speed Changing

Left-hand control. Three forward speeds and one reverse, providing efficient gear ratios, for all kinds of driving. Gear shifting lever

Partial View of Auxiliary Lubrication System, Showing Entrance of Oil Leads to Cylinder Walls





Packard "38" Gasoline System

SPECIFICATIONS—1913 PACKARD "38"—CONTINUED

has selective action in single quadrant. Lever moves forward and backward for forward speeds and laterally for reverse. Reverse movement locked by thumb latch. Locks on shifter shaft assist in determining the correct alignment of gears. Annular ball bearings, throughout transmission.

Final Drive

Aluminum housing, internally ribbed for strength and rigidity, contains speed changing gears, final drive, bevel gears and differential.

Rear axle, final drive and differential gears run on annular ball bearings, and ball thrust bearings. Differential gear unit supported by its own bearings, rear axle being removable without disturbing gears. Housing provided with oil plugs and inspection holes.

Brakes

There are four brakes, two service and two emergency, all acting directly on the rear wheel brake drums. The service brakes, continuous, external, contracting bands, are operated by the right pedal. The emergency brakes, internal, expanding segments, are operated by the hand lever. Internal brakes are enclosed, protected by drum discs, and equipped with bayonet locks to prevent rattle.

Running Gear

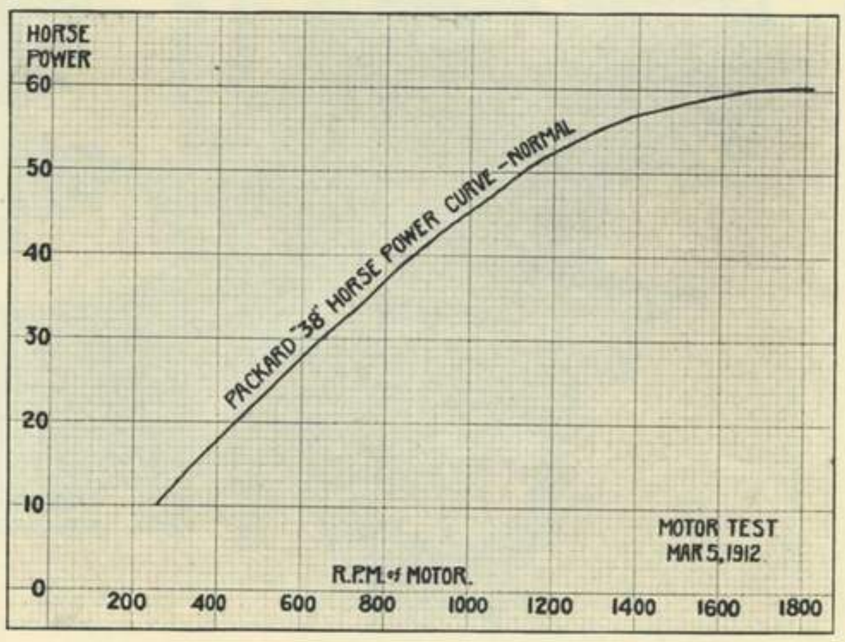
Main Frame

Pressed steel frame, channel section of extra depth and special alloy; arched above rear axle and extended rearward to protect gasoline tank. Frame extra narrow in front, allowing short turning radius.

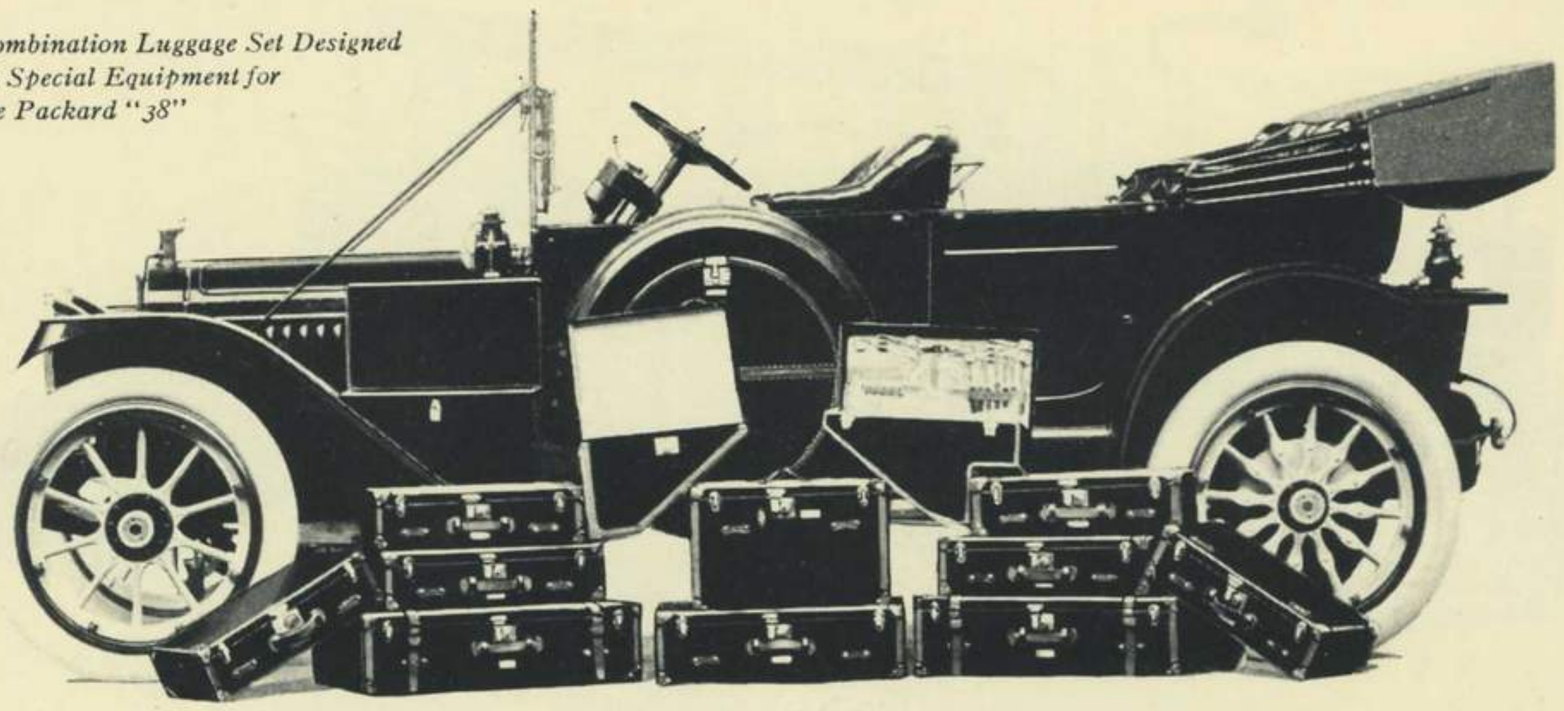
Steering

Worm and nut steering gear. Worm and worm shaft forged integrally with flange joint. Nut provided with trunnioned discs, which operate yoke. Yoke and yoke shaft forged

Table Showing Horsepower Curve of 1913 Packard "38" Motor

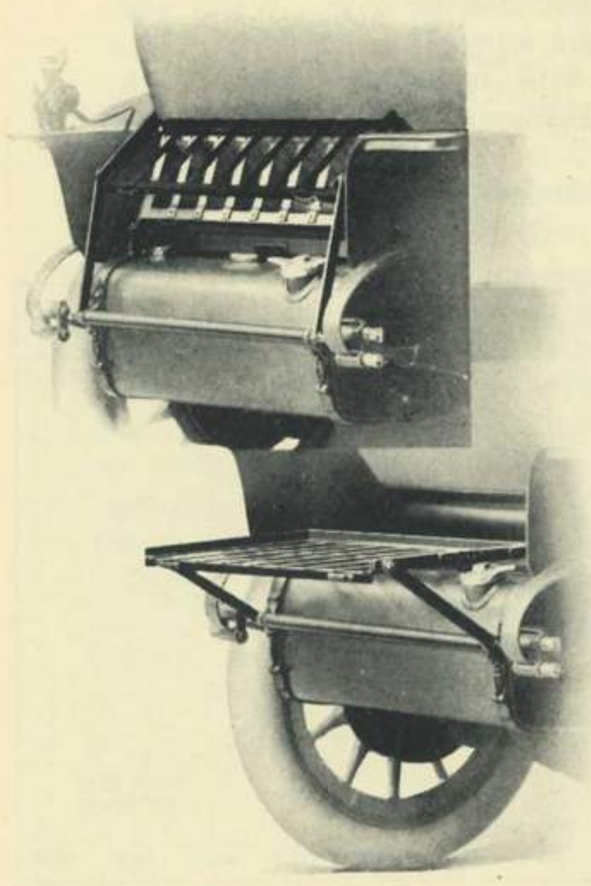


Combination Luggage Set Designed as Special Equipment for the Packard "38"



SPECIFICATIONS—1913 PACKARD "38"—CONCLUDED

integrally with large squared end to receive extra heavy special steel drop-forged steering lever. Steering connecting rod so arranged that the car can turn in either direction in a circle forty-one feet, six inches wide. Steering knuckles are extra heavy section steel drop forgings. One-piece steering gear case. All spark and throttle operating mechanism completely enclosed but readily accessible for inspection. Starting, ignition and lighting systems and fuel mixture controlled from board on steering column. Steering connecting ball joints are protected by leather boots. All steering gear bearings and connections directly lubricated by grease cups.



Showing the Packard Trunk Rack in Folded and Carrying Positions

Springs

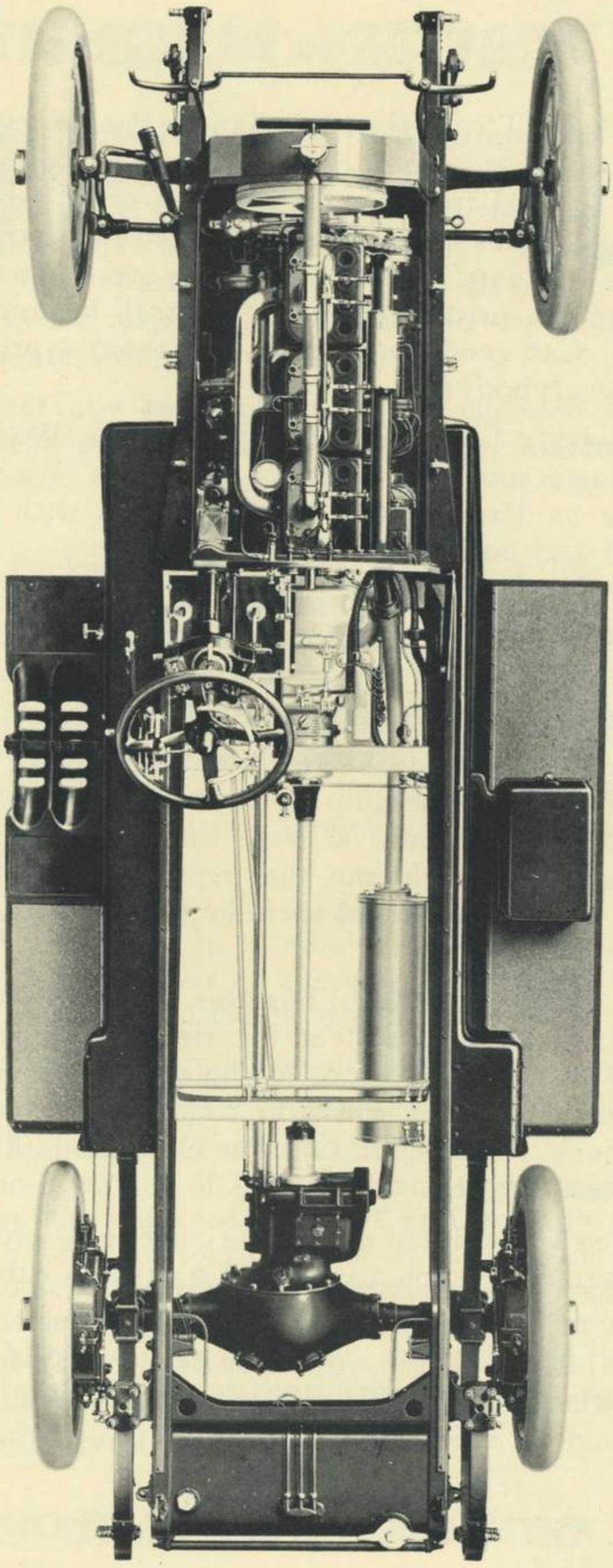
Front springs, 2 by 40-inch, semi-elliptic. Rear springs, 2 by 51-inch, three-quarter scroll elliptic. All springs of special alloy steel. All plates are polished and assembled with graphite. Spring eyes reamed and fitted with renewable hard bronze bushings. All spring clips extra large and of special steel. All spring bolts are of large diameter and are hardened and ground. Bolts are provided with a lug to fit in shackle to prevent movement between shackle and bolt. Compression grease cups lubricate all spring bearings. Shock absorbers and rubber bumpers on both front and rear axles. Limit straps around rear axle to preclude possibility of spring breakage on rebound.

Axles

I-beam front axle of extra heavy cross section. Steering knuckles have yokes forged integrally. Steering knuckle pin of large diameter and inclined for easy steering. All bearings of ample surface, hardened and ground. Rear axle tubes of large diameter and heavy gauge pressed into and riveted within flange collars bolted to internally ribbed aluminum rear axle housing. Hubs machined from steel drop forgings. Hub flanges of heavy gauge pressed steel.

Body Construction

Sheet aluminum panels over wood framework. Bonnet, aluminum, secured against rattling. Front fenders flanged for rigidity. Splash aprons between front fenders and car. Rear fenders, so attached to body as to be practically water-tight. Splash aprons on outside of running board brackets between frame and running board.



Plan View of 1913 Packard "38" Touring Chassis

WHAT IS A BARGAIN?

WHAT is a bargain? Is it a Packard at the right price or is it any car at a low price? Is the final answer in the first cost or in the total cost? What is the difference between a bargain and a "snap?" Does a cut price mean a low net price or a high list price? Where is the real bottom in price cutting? Can goods be sold for less than a price that is just to everybody?

Somebody has to pay for everything. What you get for nothing is good for nothing or it is a gift. We have made the price on Packard cars commensurate with the goods delivered and no higher.

We treat everybody exactly alike. You know that you are not "beating the game" and you know that nobody else is. You might "stand to win" in a cut price deal but a motor car investment is not a good game for a gamble.

The Packard buyer does not pay for the "Packard reputation." It is because he pays for the Packard car—just that, no more and no less—that there is a Packard reputation. We might put that reputation on the bargain counter. How long would there be a bargain, a reputation or a Packard?

We are in a permanent business. The only way we can live and thrive is to deliver the right goods at the right price. Too much bargain or too much profit would throttle us out of being. You can stop a motor with too little gas or too much. And reputation, the electric spark, won't fire a dishonest mixture.

When a price is cut something comes off—profit, quality or service. When you are offered a car at a cut price, find out what comes off.

We believe that it costs you less to pay for Packard service when you buy the car than afterwards. Technical service is not a defense of the price—it is a part of the price.

ASK THE MAN WHO OWNS ONE

PACKARD SERVICE

PACKARD dealers throughout the country coöperate with the Packard factory in the most willing, the most expert and the most comprehensive service in the world. We can supply any part for any Packard car ever sold. Extra parts for all models are made in complete service shops separate from the main factory.

To meet any requirement of the eighteen thousand Packard vehicles on the road, nearly one million dollars' worth of extra parts is carried in stock at the Packard factory.

Each Packard dealer carries a complete line of parts in stock and maintains a Service Department with all facilities for keeping Packard cars and trucks at the highest point of efficiency.

Every Packard owner commands, free of charge, the services of factory-trained experts in inspecting his car and making minor adjustments. Packard dealers take the initiative in keeping cars running to the satisfaction of their owners.

Packard service applies in equal measure to Packard trucks and is a factor in keeping the heavy duty vehicles in operation every hour of every working day. Packard trucks are in successful use in 163 lines of trade.

In all Packard establishments the same consideration is extended to every Packard owner, regardless of his place of residence or where he purchased his vehicle.

For the hundreds of Packard owners who tour abroad each season, the Packard Motor Car Company of Paris maintains a complete service depot at No. 5 Rue Newton, Paris. This depot carries extra parts and provides tourists with the same technical attention that they receive at home. It also arranges shipments of cars and lends its assistance in all details of continental travel.

Packard service follows the car.

ASK THE MAN WHO OWNS ONE

HOW WE MADE GOOD

IN the very beginning we felt that we were in a good business with a good future. We saw in the automobile something that was to be a lasting factor in the world's commerce. We saw the signs of permanency as well as progress in the evidences of a new era in traffic.

We saw that a type of car had to be selected and designed, that it had to be tried out, that it had to be made practical and as nearly perfect as our experience, ingenuity and skill could make it. We saw that this car had to be backed by definite, firm and fair business methods. We saw that our business, like any other permanently successful business, had to be based on the one very simple and logical foundation of a square deal for everybody.

We found a selling condition prevailing which did not entirely fit in with our plans, and we made it our business to let our organizing comprehend our dealers as well as our factory.

As far back as 1904, we laid down the principle that we would have nothing in our construction which would cause wear on what might be called the skeleton of the car. It was decreed that the parts that are subjected to legitimate wear should be easily and economically replaceable. This sounds like merely a mechanical detail. As a matter of fact, it would not be possible for dealers all over the country to guarantee, six months ahead, the approximate value of a used Packard car unless they knew that a used Packard can be placed in a readily marketable condition by minor replacements, made possible by the removable bushings that were incorporated in the early design.

The second element in Packard growth has been coöperation, absolute and complete. No one man built the Packard factory, no one man designed the Packard car, no one man made the Packard organization or formulated the Packard policies. Each man has helped to share the burdens of the others.

The third factor in our progress has been the almost limitless capacity for work of the men who have made up our organization. Every problem conquered has simply led us to some new problem, and every task previously done has been the foundation of even greater efforts.

In equal measure, the success of these essentials has made possible and has been made possible by the car we build.

We concentrate on the type of car we believe is the right one for us to make. We originally set out to build nothing but the highest type of motor vehicle, and upon this purpose we have centered all our subsequent effort.

In developing our type of car, the changes have been always careful and invariably beneficial. Every improvement is the result of cautious experimenting, followed up by exhaustive tests on the road. During the last fiscal year our development department cost us over $400,000. It is a complete factory in itself.

The plan we have followed of developing a type will continue to be followed. As it is possible to provide additional comfort and convenience, as we learn to make things better, the car will improve accordingly, just as it has improved. But there will be no abandonment of our purpose, no changes merely for the sake of change, and no readjustments of plans, methods, principles or car.

We are building for permanency in this business, and our tools are optimism, imagination, coöperation, concentration, honesty of purpose and hard work.

Factory of the Packard Motor Car Company at Detroit, Michigan. Seven Thousand Workmen; Thirty-Seven Acres of Floor Space

PACKARD DEALERS

Albany, N. Y. - - - - Dominant Motor Co.
Amsterdam, N. Y. - - - - Greene & Warnick
Atlanta, Ga. - - - - - - - - - H. B. Odell
Baltimore, Md. - - - - Mar-Del Mobile Co.
Bay City, Mich. - - - - - - - C. J. Bousfield
Binghamton, N. Y. - - - - - - R. W. Whipple
Birmingham, Ala. - - - - Charles Denegre
Bloomington, Ill. - Packard Motor Car Co. of Chicago
Bridgeport, Conn. - - - The Blue Ribbon Garage
Brooklyn, N. Y. Packard Motor Car Co. of New York
Boston, Mass. - Packard Motor Car Co. of Boston
Bradford, Pa. - - - - - Bradford Garage Co.
Buenos Aires, A. R. - - - - - - - L. R. Mack
Buffalo, N. Y. Packard Motor Car Co. of New York
Butte, Montana - - Montana Auto and Garage Co.
Calgary, Alberta - - - - - - The Chapin Co.
Charleston, S. C. - - - - Gibbes Machinery Co.
Charlotte, N. C. - - - - Osmond L. Barringer
Chattanooga, Tenn. - - Bill Jones Automobile Co.
Chicago, Ill. - - Packard Motor Car Co. of Chicago
Cincinnati, Ohio - - - - Citizens Motor Car Co.
Cleveland, Ohio - - - - Parrish Motor Car Co.
Columbia, S. C. - - - - Gibbes Machinery Co.
Columbus, Ohio - - - - - - - - F. E. Avery
Dallas, Texas - - Allen-Vernon Motor Car Co.
Davenport, Iowa - - - - - Buck Motor Car Co.
Dayton, Ohio - - - - - Citizens Motor Car Co.
Denver, Colo. - - - - MacFarland-East Auto Co.
Des Moines, Iowa - - - Johnston Motors Co.
Detroit, Mich. - - - - - Standard Auto Co.
Dubuque, Iowa - - - - - Tri-State Auto Co.
Duluth, Minn. - - - - - Zenith Service Co.
Dusseldorf, Germany - - - - Carl Dreymann
Edmonton, Alberta - Northrup Motor Service Co.
Erie, Pa. - - - - - - - Wolverine Motor Co.
Fairmont, W. Va. - - - Standard Garage Co.
Fort Worth, Texas - Allen-Vernon Motor Car Co.
Grand Rapids, Mich. - - - - Peck Auto Co.
Greensburg, Pa. - - - Standard Automobile Co.
Hamilton, Ontario - Ontario Motor Car Co., Ltd.
Harrisburg, Pa. Packard Motor Car Co. of Philadelphia
Hartford, Conn. Packard Motor Car Co. of New York
Honolulu, T. H. - The von Hamm-Young Co., Ltd.
Houston, Texas - - - - - - Young & Dwire
Indianapolis, Ind. - - - Carl G. Fisher & Co.
Jacksonville, Fla. - - - - - - Julian Howard
Kansas City, Mo. Packard-Kansas City Motor Co.
Knoxville, Tenn. - - - - Frank A. Carpenter
Lafayette, Ind. - - - - Charles Shambaugh
La Salle, Ill. - - - - - - - - - A. T. Faull
Little Rock, Ark. - - - - - W. E. Bell Auto Co.
Los Angeles, Cal. - - - - California Motor Co.
Louisville, Ky. - - - - Southern Motors Co.
Memphis, Tenn. - - Jerome P. Parker-Harris Co.
Mexico City, D. F. - - - Garage Mexicano, S. A.
Milwaukee, Wis. - Packard Motor Car Co. of Chicago
Minneapolis, Minn. - - Joy Bros. Motor Car Co.
Montreal, Quebec - The Comet Motor Co., Ltd.
Nashville, Tenn. - - Imperial Motor Car Co., Inc.
Newark, N. J. - Packard Motor Car Co. of New York
New Orleans, La. - - Abbott Automobile Co., Ltd.
New York, N. Y. Packard Motor Car Co. of New York
Omaha, Neb. - - - - - - Orr Motor Sales Co.
Ottawa, Ontario - - Ontario Motor Car Co., Ltd.
Paris, France - - Packard Motor Car Co. of Paris
Peoria, Ill. - - - - - - - - M. M. Baker & Co.
Philadelphia, Pa. Packard Motor Car Co. of Philadelphia
Pittsburgh, Pa. Packard Motor Car Co. of Pittsburgh
Port Henry, N. Y. - - - - - C. M. Putnam
Portland, Maine - Packard Motor Car Co. of Boston
Portland, Oregon - - - - - - - Frank C. Riggs
Providence, R. I. Packard Motor Car Co. of Boston
Quincy, Ill. - - - T. C. Nichols Motor Car Co.
Reading, Pa. - - - - - Reading Automobile Co.
Richmond, Va. - - - - Gordon Motor Co., Inc.
Rochester, N. Y. - - - - Mandery Motor Car Co.
Rockford, Ill. - - Packard Motor Car Co. of Chicago
Salt Lake City, Utah - - - Utah Motor Car Co.
San Antonio, Texas - - - - Citizens Auto Co.
San Francisco, Cal. - - - - - - - Cuyler Lee
Saratoga Springs, N. Y. - - - - J. A. P. Ketchum
Savannah, Ga. - - - - - - - - T. A. Bryson
Scranton, Pa. - - - Lackawanna Automobile Co.
Seattle, Wash. - - - - - J. T. Keena & Co.
Spartanburg, S. C. - - - Gibbes Machinery Co.
Springfield, Mass. Packard Motor Car Co. of New York
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St. Johnsbury, Vt. - - - - - C. H. Goss Co.
St. Louis, Mo. - - - - Halsey Automobile Co.
St. Paul, Minn. - - - - Joy Bros. Motor Car Co.
Syracuse, N. Y. - - - C. Arthur Benjamin, Inc.
Tacoma, Wash. - - - - - J. T. Keena & Co.
Tokyo, Japan - - - - - - - Sale & Frazar, Ltd.
Toledo, Ohio - - - - - - - Standard Auto Co.
Toronto, Ontario - The Ontario Motor Car Co., Ltd.
Trenton, N. J. Packard Motor Car Co. of Philadelphia
Uniontown, Pa. - - Standard Automobile Garage
Utica, N. Y. - - - - - - Central Auto Sales Co.
Vancouver, B. C. - - Dominion Motor Car Co., Ltd.
Victoria, B. C. - - Dominion Motor Car Co., Ltd.
Washington, D. C. - - - - - - The Luttrell Co.
Wheeling, W. Va. Engineering and Equipment Co.
Wilkes-Barre, Pa. - - Lackawanna Automobile Co.
Wilmington, N. C. - - - W. D. MacMillan, Jr.
Winnipeg, Man. - Western Canada Motor Car Co., Ltd.
Worcester, Mass. - Packard Motor Car Co. of Boston
Youngstown, Ohio - - - - - The Motor Mart

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