

Jackson
1914

**NO HILL TOO STEEP
NO SAND TOO DEEP**

Jackson

Motor
Cars
1914



JACKSON - AUTOMOBILE - COMPANY

G. A. MATTHEWS, Pres.
F. C. MATTHEWS, V. Pres.

H. E. MATTHEWS, Secy.
H. A. MATTHEWS, Treas.

Jackson

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Michigan

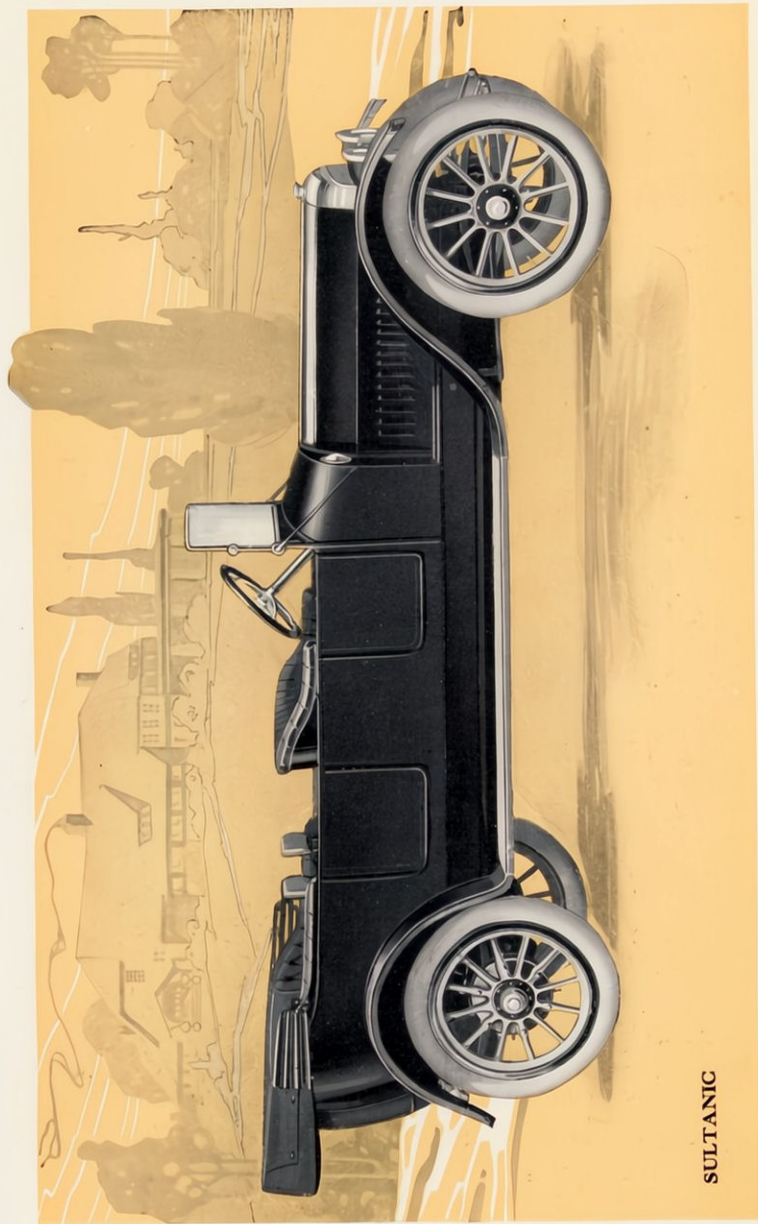


IN the fall of 1902, more than eleven years ago, the Jackson Automobile Company made its first car. This was before the days of quantity production, and the problem that confronted us was not "Can we make it to sell at the price?" but "Will it run?"

In a broad sense, that is the question that has been before us ever since. We have not designed cars with the idea of reducing their cost, but rather with a view to making them thoroughly and permanently serviceable. "Will it run?" How long will it run, how silently, up how steep a hill, and how economically? How comfortably will the passengers ride? These are the questions, essentially, that we have answered in our 1914 product. With reasonable care, there are many years of faultless service in every car that we make.

All Jackson motors are of the unit power plant type—with motor, clutch and transmission incorporated in one housing. This construction is oil tight, and protects the mechanism from all dust and dirt. It insures the absolute alignment of the working parts under any conditions, because all stresses are applied to the power plant as a whole, and do not tend to throw the bearings out of line. The power plants are supported in the frames by the flexible three-point system. The chassis frame, under a severe road strain, is free to twist slightly around the motor without putting any stress upon it.

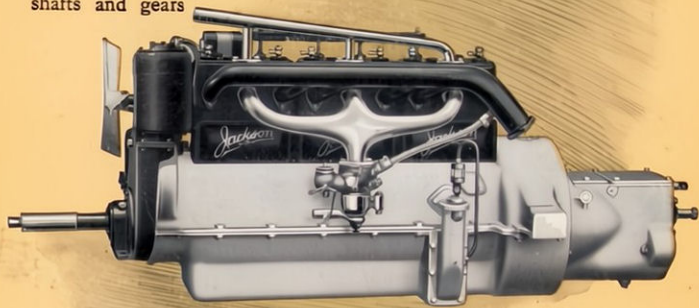
The cylinders are cast in pairs from gray iron of a special formula. They are carefully annealed before being ground, so that all internal strains are relieved, and the cylinder walls will have the same perfectly true surface when heated to a running temperature, as when cold. The pistons are ground, and made to a standard weight, as are the connecting rods. Each piston and connecting rod must balance to the fraction of an ounce, so that the motor will run without vibration at all speeds. The crankshaft is drop-forged from special alloy steel, and after a careful heat treatment, is ground to size at each bearing. The crankshaft bearings are scraped by hand to a perfect fit, and with a constant flow of oil when the motor is running, they give long service without adjustment. The crankcase is aluminum, and is made in two halves, the upper half carrying the crankshaft and camshaft. The lower half contains the entire oiling system and oil reservoir, and its removal gives access to all of the motor bearings.

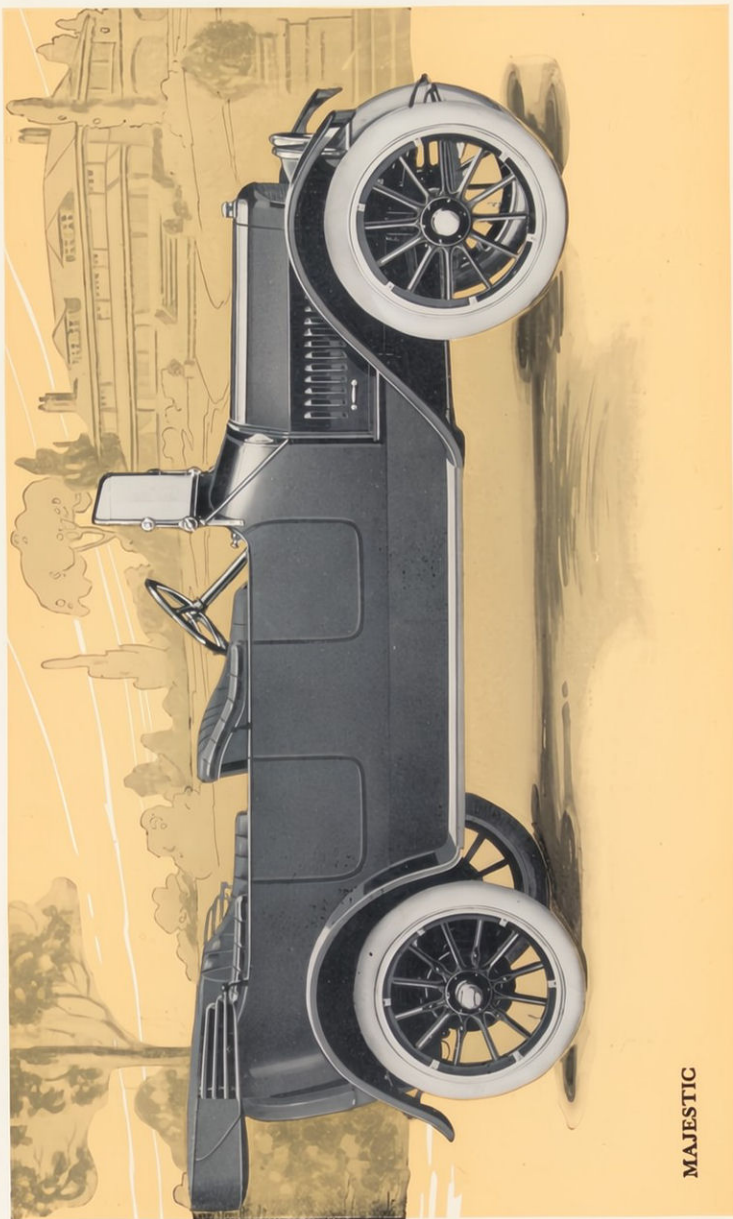


SULTANIC

The camshaft is drop-forged from alloy steel and submitted to a heat treatment which brings out the maximum toughness of the metal. The cams are forged integrally with the shaft, and after heat treatment are ground to accurate dimensions. The camshaft is driven, in the Olympic and Majestic motors, by helical timing gears. By the use of this type of gear, backlash, with the consequent clicking of valves, is eliminated. In the Sultanic motors, where the overlapping impulses of the six-cylinder make a constant load, the camshaft is driven by silent chain from the crankshaft. Tungsten steel is used for the valves. Its properties make it especially suitable for this service, and the valves are free from any tendency to warp and pit. The valves are drop-forged, and after machining, the valve and stem are ground to an accurate fit. The valves work in removable bushings, which can be replaced when worn. The push rods are also fitted in removable guides, which can be replaced when necessary at a nominal cost. The valves and push rods are enclosed. This construction not only protects the moving parts from dust, but makes the valve action absolutely silent.

The aluminum clutch-cone is designed for extreme lightness. When the clutch is thrown out, the momentum of the revolving cone is comparatively low, on account of its light weight, and it stops almost immediately, allowing the gears to be engaged, without clashing. When the clutch is not engaged its weight is carried by heavy ball bearings, so that wear at the clutch hub is impossible. These ball bearings are lubricated through an oil passage in the clutch shaft. The main transmission shaft, where it telescopes into the clutch shaft, runs in a specially designed roller bearing, which is also lubricated through a passage in the shaft. The clutch shaft and both transmission shafts run in annular ball bearings. The transmission shafts and gears





MAJESTIC

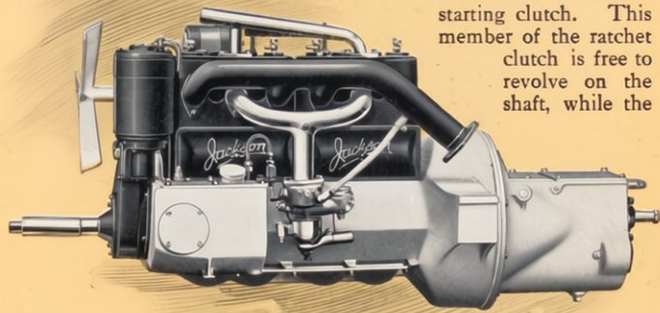
are made from chrome nickel steel, drop-forged into blanks and heat treated before being machined.

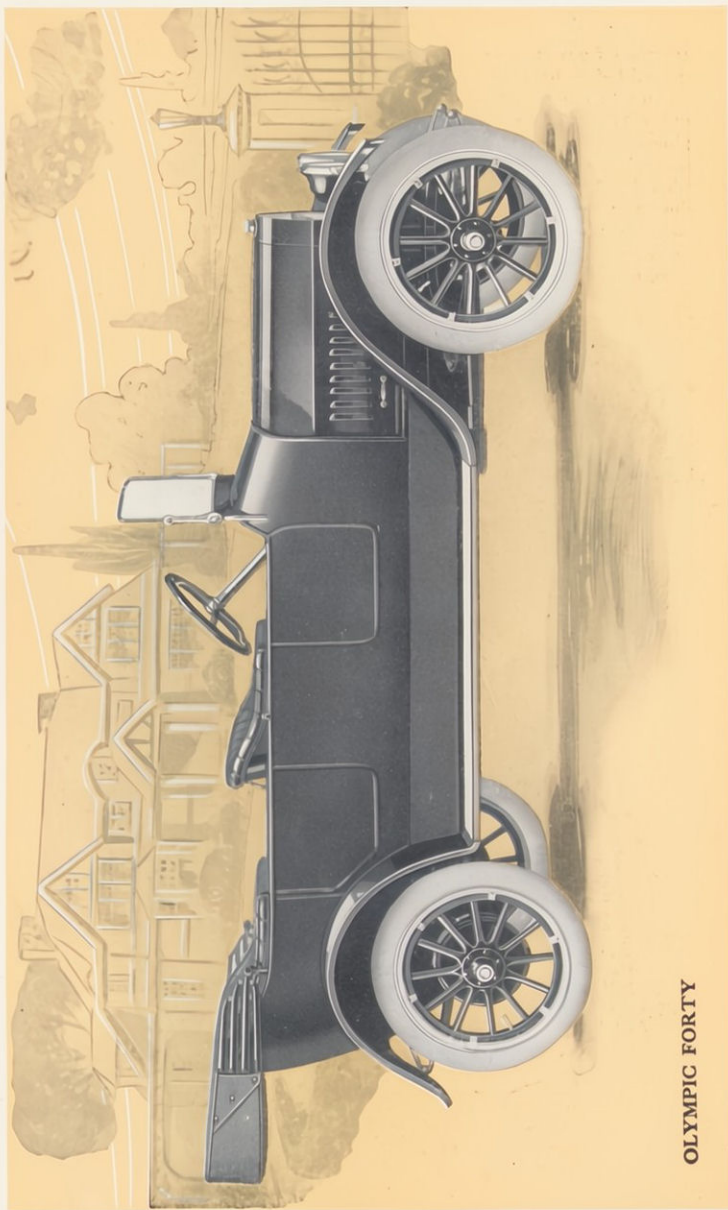
An oil supply, sufficient under ordinary conditions for five hundred miles, is carried in the crankcase reservoir. The oil is forced by a plunger pump from the reservoir into the crankcase. It is circulated through the different crankcase compartments and is constantly replenished by the supply from the pump. The amount of fresh oil which the pump delivers is indicated by a sight feed, and may be regulated by an adjustment on the outside of the case. The service gasoline tank, in each model, is carried under the dash, so that with a short intake pipe, there is still a sufficient drop from the tank to the carburetor to insure a steady feed by the gravity system. In the Majestic and Sultanic there is a storage tank at the rear of the chassis, from which fuel is supplied to the service tank with a pressure pump. In the cooling system water is circulated by a centrifugal pump driven from the magneto shaft. The radiators are of ample size.

All Jackson motors are built with the electric cranking and lighting system. Current is generated by a dynamo driven from the motor. The dynamo charges a storage battery, and current is drawn from the battery to crank the motor and light the lamps when the car is not running.

The system operates on six volts, and the wiring consequently is simple and direct. The electric cranking motor is mounted vertically at the front end of the engine.

On the lower end of the armature shaft is a worm gear, which engages a large gear on the countershaft. Above and below the worm gear on the armature shaft are ball bearings, which prevent wear and keep the worm in perfect mesh with the gear. Keyed to the large gear is a small sprocket. A roller chain runs from this sprocket to the free member of the ratchet starting clutch. This member of the ratchet clutch is free to revolve on the shaft, while the





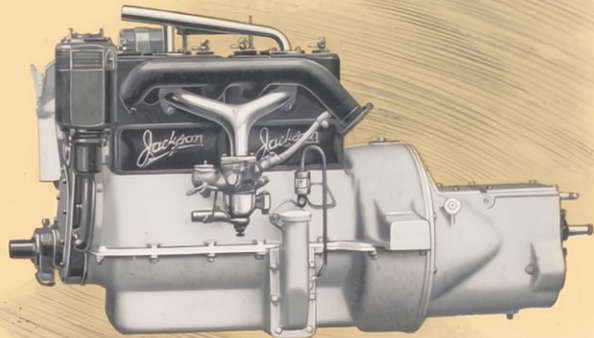
OLYMPIC FORTY

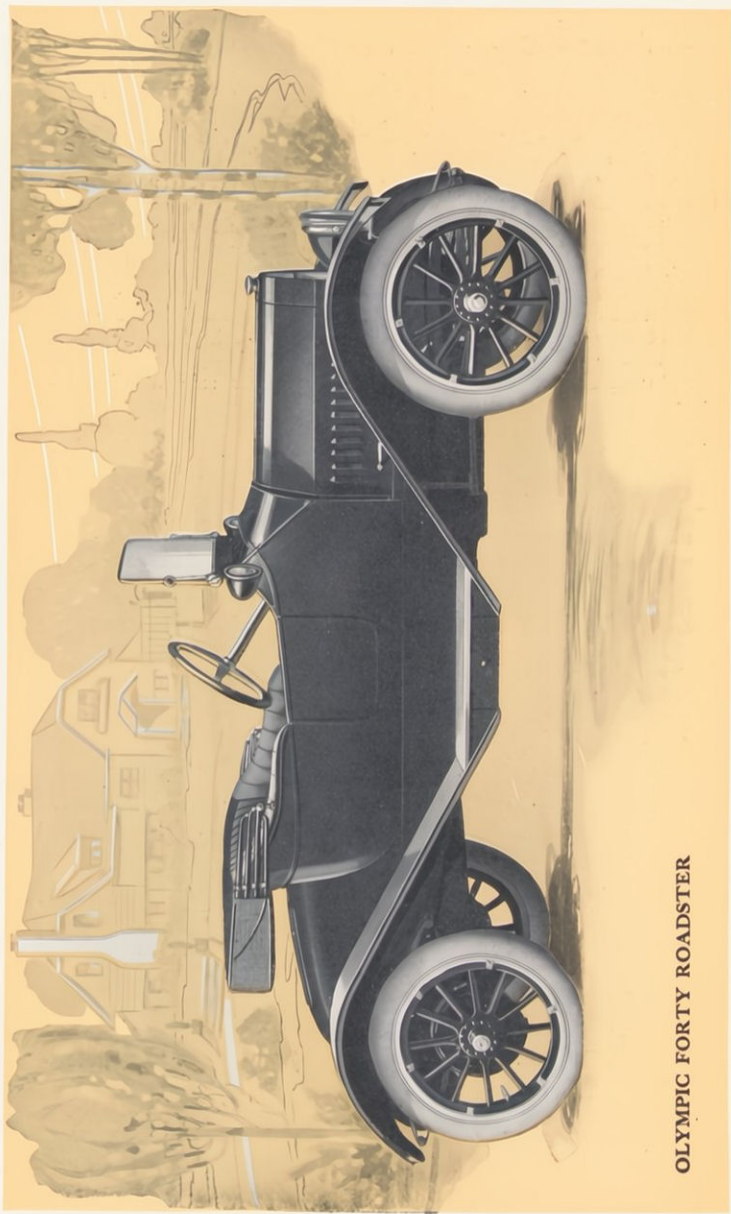
other member moves in and out of engagement on the splined starting shaft with which it rotates. When the clutch is not engaged, the motor is entirely free from the starting mechanism, and can rock back and forth without restriction. The foot switch in the floor board controls both the clutch and the starting motor. When the switch is first depressed the teeth of the clutch are brought into engagement—then the electric contact is made which sends the current into the starting motor and cranks the engine.

The convenience and economy of electric lights has done more to make night driving a pleasure than any other single development of our design. The powerful electric headlights throw a flood of brilliant white light as far ahead on the road as the driver can see. The lights are controlled by the touch of a button on the dash, and the storage battery from which they draw their current is kept fully charged by the dynamo driven from the motor.

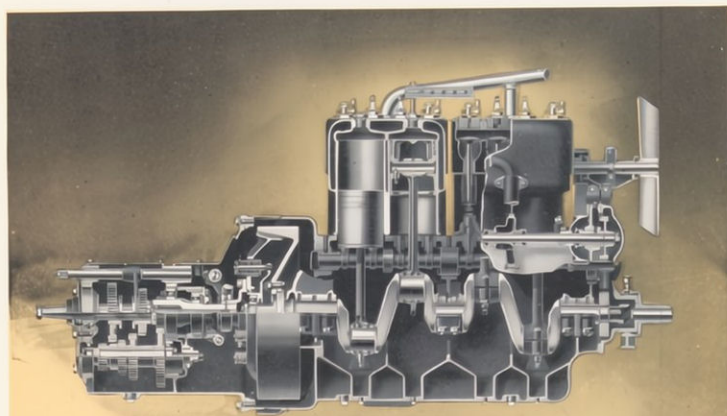
In the Sultanic and Majestic models the rear axle is full floating—the entire weight of the car is carried on the pressed steel housing. The Sultanic and Olympic axles are made with propeller shaft housings which take the driving torque, while the Majestic has a separate torque arm with the double universal joint construction. The Olympic axle is the semi-floating type with nickel steel shafts. The wheels are securely fitted to the tapered ends of the shafts and held in place by castellated nuts. The nuts in turn are kept from loosening by a pin through the end of the shaft. Every precaution is taken for the security and safety of this vital part of the driving system.

Jackson steering gears are made throughout in our own shops, and we can be sure of their safety and long wearing



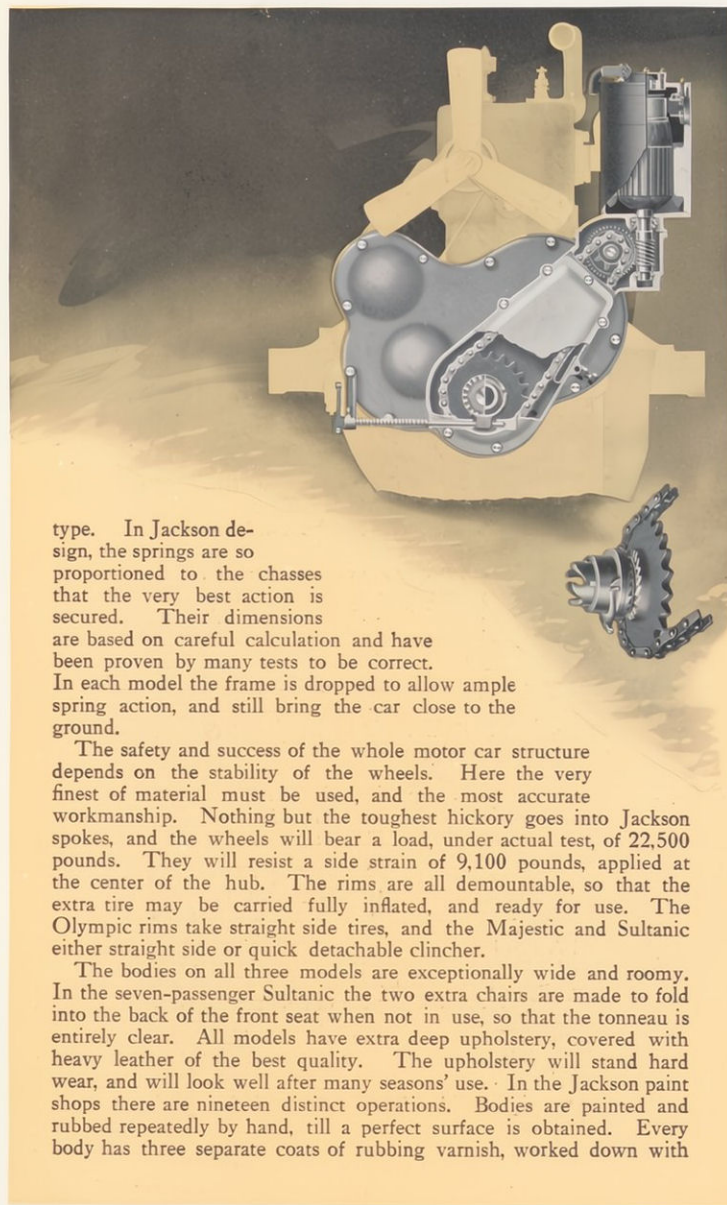
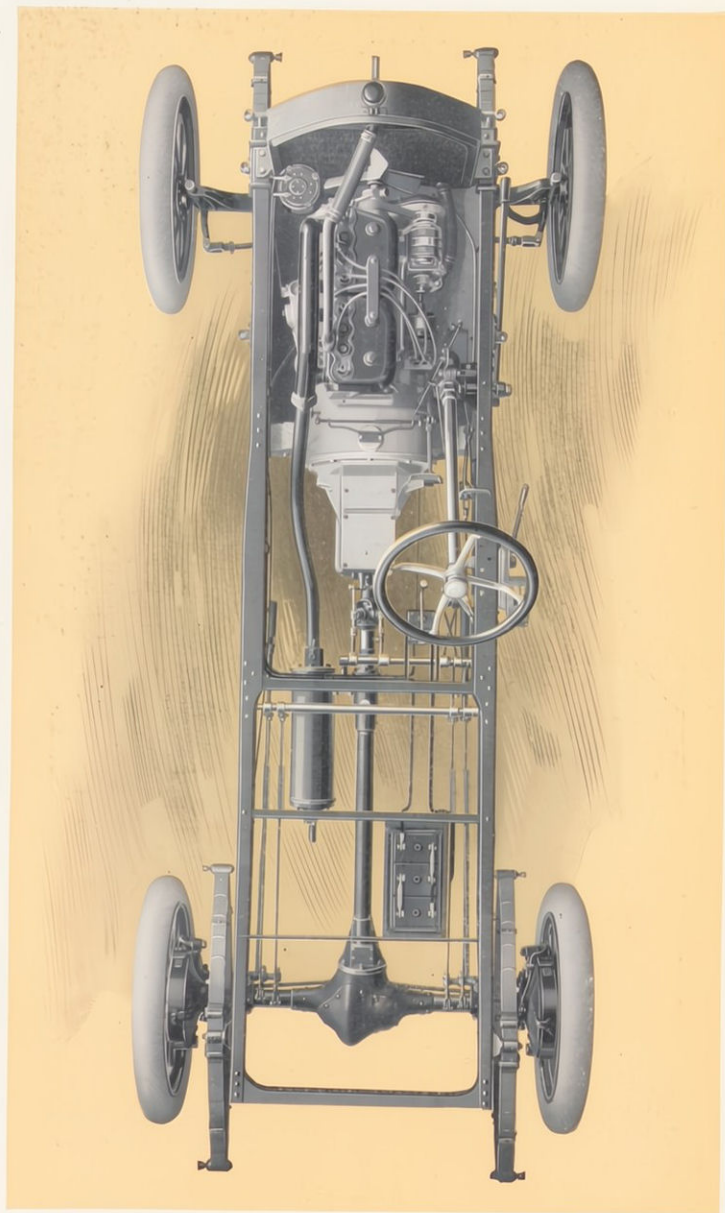


OLYMPIC FORTY ROADSTER



qualities. We cut the gears from drop-forged blanks, which are carefully heat treated before machining. The gear and rockshaft are forged in one piece, to avoid any possibility of looseness. The gear is carefully hardened, and the rockshaft ground to an accurate fit. Above and below the worm gear are adjustable ball thrust bearings, and the rockshaft is hung in eccentric bushings, which may be turned to take up wear between the worm and the gear. The steering arm is fitted to the squared and tapered end of the rockshaft, and this construction also provides a simple and effective adjustment. The steering arm may be slipped off from the shaft, the hand wheel turned till the squared shaft has made a quarter revolution, and the steering arm replaced. This brings an entirely new section of the gear into engagement with the worm. In this way, four different positions are easily available for taking up play from time to time. The top of the spark and throttle control tube is drawn down into a tapered shoulder to obviate any tendency to rattle, and every detail of the gear is as perfect as we can make it.

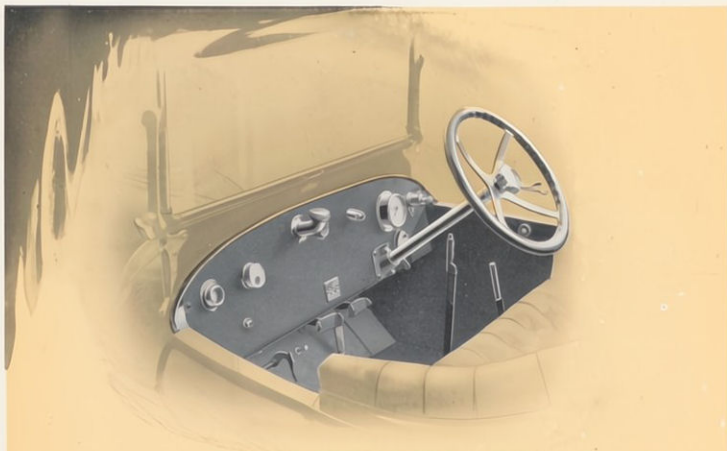
Since the inception of the Jackson Company, our engineers have given their constant attention to the problem of spring suspension. No matter what power or speed a motor may have, the actual performance of the car depends on how fast it can be driven over the average road without shaking itself to pieces. The comfort of the passengers is one of the first essentials in the design of a car, and by the use of four full elliptic springs—two in front and two at the rear—we have made the Jackson famous for its easy riding qualities. The full elliptic spring has from fifty to one hundred per cent more efficiency than any other



type. In Jackson design, the springs are so proportioned to the chasses that the very best action is secured. Their dimensions are based on careful calculation and have been proven by many tests to be correct. In each model the frame is dropped to allow ample spring action, and still bring the car close to the ground.

The safety and success of the whole motor car structure depends on the stability of the wheels. Here the very finest of material must be used, and the most accurate workmanship. Nothing but the toughest hickory goes into Jackson spokes, and the wheels will bear a load, under actual test, of 22,500 pounds. They will resist a side strain of 9,100 pounds, applied at the center of the hub. The rims are all demountable, so that the extra tire may be carried fully inflated, and ready for use. The Olympic rims take straight side tires, and the Majestic and Sultanic either straight side or quick detachable clincher.

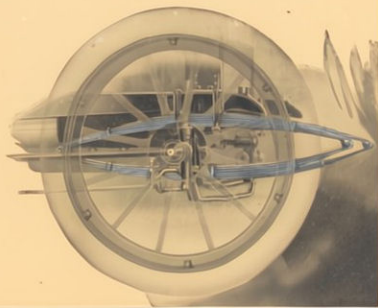
The bodies on all three models are exceptionally wide and roomy. In the seven-passenger Sultanic the two extra chairs are made to fold into the back of the front seat when not in use, so that the tonneau is entirely clear. All models have extra deep upholstery, covered with heavy leather of the best quality. The upholstery will stand hard wear, and will look well after many seasons' use. In the Jackson paint shops there are nineteen distinct operations. Bodies are painted and rubbed repeatedly by hand, till a perfect surface is obtained. Every body has three separate coats of rubbing varnish, worked down with



water and fine pumice, before the finishing varnish is applied. This method of finishing gives a surface that will stand long service and still retain its gloss. Fenders, hoods and hood-ledges are enameled and baked.

The tops for all Jackson cars are made in our own shops—designed to harmonize perfectly with the lines of the bodies. They are made from the best quality of mohair, and the side curtains are of the same material. The curtains are carried in compact rolls strapped to the bows inside of the top, where they are entirely out of the way, but can be reached instantly without disturbing the passengers. When the curtains are to be used it is only necessary to loosen the straps which hold them, and they are guided to their places by short irons which pass through eyelets in an upper corner. Each curtain falls to its own position, and there is no delay in adjusting them. The convenience of this arrangement will be appreciated by the motorist who has been caught in a sudden shower and found himself unable to fit the curtains without first finding shelter. These are fastened entirely from the inside and can be put on without even stopping the car.

Equipment includes everything needed to make the car ready for the road. Each model is fitted with top, top hood, windshield, speedometer, demountable rims, oil gauge and gasoline gauge, coat-rail, foot-rail and electric horn. All models have electric cranking systems and electric lights. Detailed specifications are on next page.



"SULTANIC" \$2300

Power Plant—Long stroke six-cylinder motor, 55 H. P. Electric cranking.
Fuel Supply—Service gasoline tank under cowl, gravity feed to carburetor and short intake pipe. Supply tank at rear of chassis, from which fuel is forced to service tank by motor driven pressure pump.
Suspension—Full elliptic springs, front and rear. Frame double dropped to bring car close to the ground and still allow full spring action.
Rear Axle—Full floating, ball bearing throughout. Tread—56 inches.
Wheel Base—138-inch. Five-passenger, 132-inch. Tires—36 x 4½-inch.
Finish—Dark blue. Trimming, black and nickel. For special colors an additional charge of \$35.00 will be made.
Equipment—Mohair top, top hood, ventilating windshield, speedometer, oil gauge and gasoline gauge on dash, speedometer light, Firestone universal quick detachable demountable rims, extra rim with carrier at rear, foot-rail, coat rail, pump, tools and jack. Electric cranking, electric lights and electric horn. Extra seats on seven-passenger fold into floor.
Price—Seven-Passenger, \$2300. Five-passenger, \$2150.

"MAJESTIC" \$1885

Power Plant—Long stroke, four-cylinder motor, 45 H. P. Electric cranking.
Fuel Supply—Service gasoline tank under cowl, gravity feed to carburetor and short intake pipe. Supply tank at rear of chassis from which fuel is forced to service tank by a pressure pump on the dash.
Suspension—Full elliptic springs, front and rear. Frame dropped to bring the car close to the ground and still allow full spring action.
Rear Axle—Full floating, ball bearing throughout. Two universal joints with torsion rod.
Wheel Base—124-inch. Tires—36 x 4-inch.
Tread—56 inches. 60 inches on special order.
Finish—Dark blue. Trimming, black and nickel. For special colors an additional charge of \$25.00 will be made.
Equipment—Mohair top, top hood, ventilating windshield, speedometer, gasoline gauge on dash, speedometer light, Firestone universal quick detachable demountable rims, extra rim, tire carrier at the rear, foot-rail, coat-rail, pump, tools and jack. Tool box under front seat leaving running boards clear. Electric cranking, electric lights and electric horn.

"OLYMPIC FORTY" \$1385

Power Plant—Long-stroke, 4-cylinder motor. 40 H. P. Electric cranking.
Fuel Supply—Gasoline tank under cowl, gravity feed. Short intake pipe.
Suspension—Full elliptic springs front and rear. Frame dropped to bring car close to the ground and still allow full spring action.
Rear Axle—Semi-floating, roller bearing throughout, with ball thrust bearings.
Wheel Base—115 inches. Tread—56 inches. 60 inches on special order.
Tires—34 x 4-inch. **Finish**—Black. Trimming, black and nickel. For special colors an additional charge of \$25.00 will be made.
Equipment—Mohair top, top hood, ventilating windshield, speedometer and gasoline gauge on dash, Firestone demountable rims, extra rim, tire carrier on running board, foot-rail, coat-rail, pump, tools and jack. Electric cranking, electric lights and electric horn. Tire carrier will be placed in rear at a net additional charge of \$5.00.

The "Olympic Forty" roadster has the same specifications as the touring car. It is fitted with a large gasoline supply tank at the rear, from which the fuel is forced to the service tank under the dash by a pressure pump. Price, \$1525.

Warranty

WE warrant the motor vehicles manufactured by us, except as noted below, for sixty days after the date of shipment, this warranty being limited to the furnishing by our factory of such parts of the motor vehicle as shall, under normal use and service, appear to us to have been defective in material or workmanship.

This warranty is limited to the shipment to the purchaser, without charge, except for transportation, of the part or parts intended to replace the part or parts claimed to have been defective, and which, upon their return to us at our factory for inspection we shall have determined were defective, and provided the transportation charges for the parts so returned have been prepaid.

We make no warranty whatever in respect to tires, rims, magnetos, carburetors, batteries, lamps, windshields or other accessories. The makers of these parts make all adjustments concerning them, and deal through their various branches directly with the consumer.

The condition of this warranty is such that if the motor vehicle to which it applies is altered, or repaired, outside of our factory, our liability under this warranty shall cease.

The purchaser understands and agrees that no warranty of the motor vehicle is made, or authorized to be made, by this Company other than that hereinabove set forth.

DELIVERIES

Our goods are delivered f. o. b. cars in Jackson and our responsibility ends when we deliver the goods in good condition to the transportation companies carrying them.

ORDERS FOR PARTS

All orders for parts should plainly state exactly what is required; the number and model of car as well as the motor number should always be given, and if there is any doubt as to the term designating the part, the order should be accompanied by a sketch of what is wanted. In sending any part to our factory for replacement or repair, it should be tagged with your own name and address, as well as ours. This is important, in order that we may identify the part when it is received. The transportation charges should invariably be prepaid. A letter of instruction should be written separately. To prevent mistakes, avoid, as far as possible, sending orders by telegraph.

Our discounts are allowed only to our regular appointed agents. Those with whom we have had no business relations on this basis are respectfully informed that cash for the list price must accompany their orders for parts and sundries. Owners of cars are requested to place their orders invariably through our agencies.