

*Studebaker*  
LIGHT-SIX

THE WORLD'S GREATEST  
THOUSAND DOLLAR MOTOR CAR

T H E

*Studebaker*

L I G H T - S I X



THE STUDEBAKER CORPORATION *of* AMERICA  
SOUTH BEND, INDIANA  
DETROIT, MICHIGAN                      WALKERVILLE, CANADA



# Introductory



THE Studebaker Light-Six has firmly established itself as a car of outstanding value and of lasting satisfaction.

Its value is real, because the Light-Six is the latest achievement of a great organization possessing unsurpassed resources in the experience and skill of men; in the completeness and modernity of facilities; in the security which comes from financial strength and because these resources have been assiduously devoted to the fixed policy of seventy-two years' standing of making the trade name Studebaker synonymous with value.

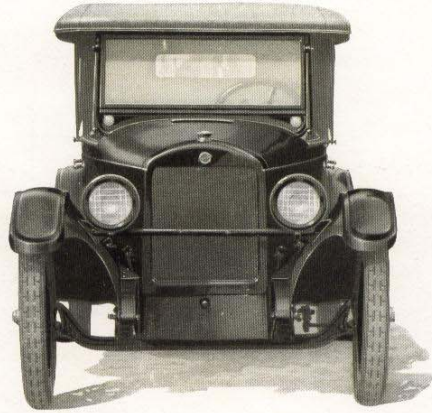
Its satisfaction is lasting, because it serves the vital requirements of the motor car of today. Durability, power and performance; economy of operation and low cost of maintenance; comfort and convenience; appearance and refinement – these essentials for lasting satisfaction are the foundation on which the reputation of the Light-Six is firmly established.

The resources of Studebaker have been utilized to secure the best engineering talent for the design of this car. Engineering achievements are exemplified in its clean-cut, harmonious construction; in balance of weight; in quietness; in the practical freedom from vibration (which results from a machining of all surfaces of the crankshaft and connecting rods) and in the power, acceleration and flexibility of the engine.

With \$90,000,000 of actual net assets, including \$50,000,000 of plant facilities, and an organization of able, experienced men and workers who participate in the profits of the business, Studebaker stands unsurpassed in resources and ability to manufacture economically and give maximum intrinsic value for a given price.

The price is low, the quality is high, the name Studebaker on the radiator insures satisfaction.

THE STUDEBAKER LIGHT-SIX



THE TOURING CAR

A COMFORTABLE-RIDING automobile is a rarity. Comfort is not assured by heavy weight, long wheel base or high price. Comfort is a matter of correct design.

Strong, sturdy bodies of ample proportions mounted without overhang on the chassis frames, with semi-elliptic springs and the entire weight of body and chassis distributed and resting equally upon the four wheels, produce the best possible road-holding results and riding comfort, provided, of course, the chassis is harmoniously designed and functions properly.

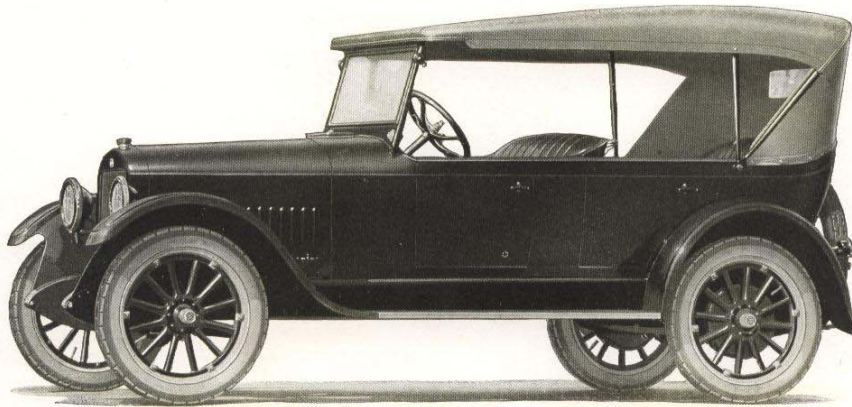
Comfort is one of the outstanding characteristics of the Studebaker Light-Six Touring Car as well as of the Roadster, Coupe-Roadster, Coupe and Sedan.

The new Touring Car body is all steel—even to its framework. It is strong, light and of generous proportions—ample room to seat five comfortably, with plenty of leg room. Lines are distinctive and unusually attractive. The lower edge of a depressed belt, which extends around the body, is carried through the hood and radiator, giving the whole car a harmonious appearance.



*Wide, deep cushions of genuine leather, placed at the precise angle for greatest restfulness, are features of the Touring Car.*

THE STUDEBAKER LIGHT-SIX



THE TOURING CAR

The seat cushions are deep and restful and are placed at the most comfortable angle. They are made of genuine leather, laid over easy but firm spring sets.

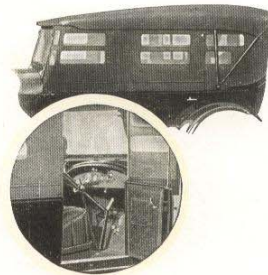
The one-piece windshield is handsome and practical because it gives clear and unobstructed view to the driver and is rain-proof. The quick-action cowl ventilator and the close-fitting curtains are but indications of the quality and completeness of the appointments of this car. The parking lights add a finished touch to the car and at the same time are most convenient.

The Touring Car body is mounted on the standard Light-Six chassis, which has proved its mechanical excellence in the hands of many thousands of owners throughout the world. The motor is exceptionally powerful and flexible, affords smooth, quiet operation and is practically free from vibration.

Light-Six economy of operation and maintenance and accessibility are common knowledge among mechanics and garage men everywhere.

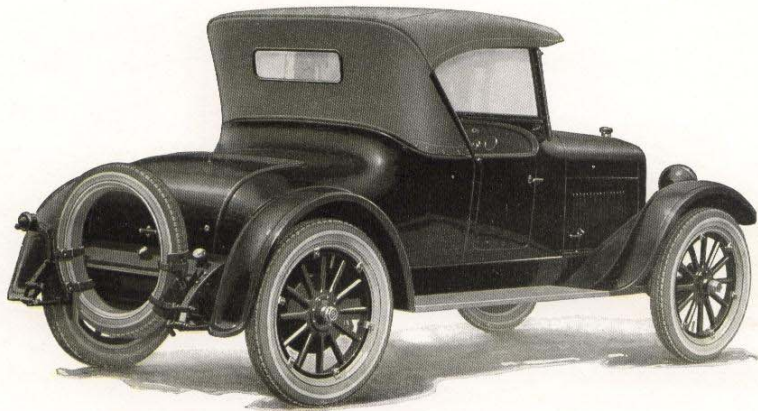
The Light-Six Touring Car upholds Studebaker's 72-year reputation for honest value.

Five



*Storm curtains which open with the doors are bound on three sides by steel rods to insure proper protection from weather.*

THE STUDEBAKER LIGHT-SIX



THE THREE-PASSENGER ROADSTER

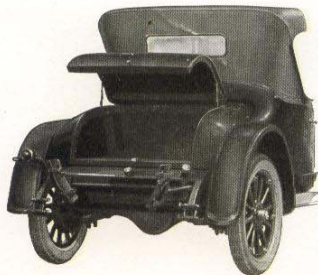
THE Light-Six Roadster is essentially a car of practical utility.

It is designed and constructed to give long, satisfactory service, is comfortable for all-day travel and is economical to purchase and maintain.

Business and professional men and small families, in this country and abroad, have found that the Light-Six Roadster ideally meets their motoring requirements.

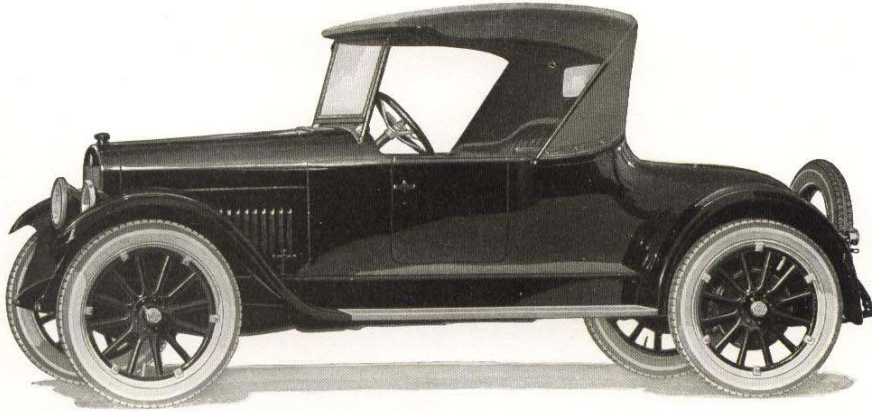
The beauty of this Roadster is distinctive and will be found elsewhere only in cars of much higher price. The lines of the top harmonize splendidly with the graceful body with its sloping rear deck.

The one-piece windshield adds to the convenience of the driver by giving clear vision and is rain-proof. The storm curtains, which open with the doors, are bound on three sides by steel rods providing a coziness that is comparable to closed-car comfort. The cowl ventilator is of the new quick-



*The spacious rear compartment of the Roadster, with wide-opening deck, provides ample space for packages and luggage.*

THE STUDEBAKER LIGHT-SIX



THE THREE-PASSENGER ROADSTER

action type, which is operated by means of a convenient lever.

The wide seat, with big, fat cushions upholstered in genuine leather, will accommodate three persons.

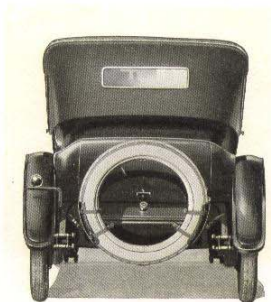
An extremely large luggage space is provided under the rear deck—ample room for anything one may wish to carry.

In the roadster are found many unusual refinements, such as the parking lights set in the windshield base, large rectangular window in the rear curtain and convenient inside and outside door handles. The thief-proof transmission lock reduces the rate of theft insurance 15 to 20 per cent. Standard non-skid cord tires all around are also included in the regular equipment.

The durability of the Light-Six, the power and flexibility of its motor, its practical absence of vibration and the way it throttles down to a walking pace in high gear are a continual source of satisfaction.

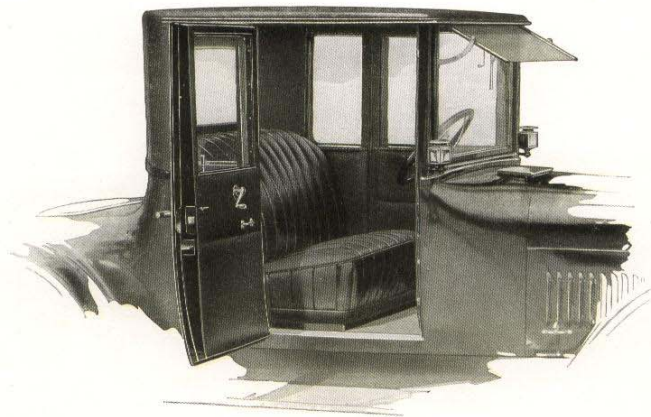
The Light-Six Roadster is a quality car—sold at a quantity price.

Seven



*Low-sweeping fenders and one-piece rear curtain with rectangular window add to the utility and appearance of the Roadster.*

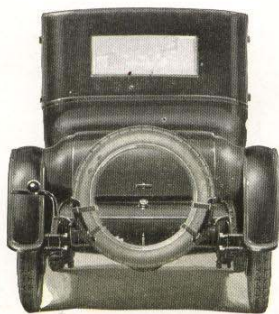
T H E S T U D E B A K E R L I G H T - S I X



T H E C O U P E - R O A D S T E R

**T**HE Coupe-Roadster is a new type of car, first introduced by Studebaker, for the use of business and professional men and women, as well as the small family. This car has been widely copied.

It is a sturdy, reliable, comfortable and beautiful car—economical to buy and to drive. It is low-priced because it is built complete in Studebaker plants. Middlemen's profits are eliminated and the savings passed along to the buyer.



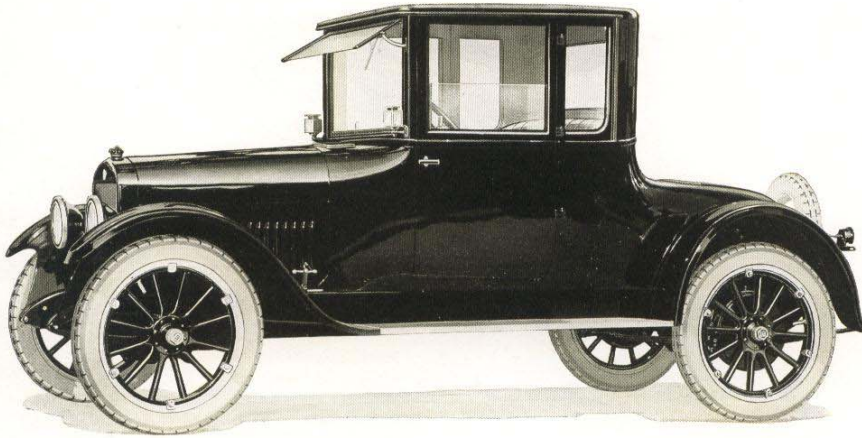
*The full rear view of the Coupe-Roadster shows the lines of the substantial top, tire carrier and the shielded gasoline tank.*

Bodies which will endure, which will stand the test of time, cannot be built from inferior materials. Studebaker designers, working with one idea uppermost, that of producing a body in every way worthy of traditional Studebaker standards, have specified throughout only materials of the highest quality. Such materials, combined with skillful workmanship, make the Studebaker Coupe-Roadster not only comfortable and beautiful, but lasting.

Evidence of the attention given to details of construction is found in the fact that the steel body panels are insulated by sound-deadening materials

*Eight*

T H E S T U D E B A K E R L I G H T - S I X



T H E C O U P E - R O A D S T E R

which eliminate the annoying rumble so often found in closed cars.

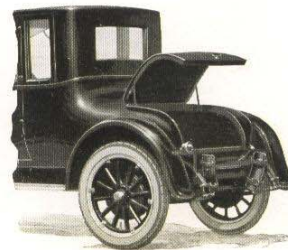
Upholstery is of genuine leather. The wide seat and deep cushions provide unusual comfort. Broad windows give wide vision in every direction. The one-piece, rain-proof windshield, quick-action cowl ventilator, attractive cowl parking lamps, glare-proof visor and windshield cleaner are appointments that add to the utility and comfort of the car. The nickel finished hardware contributes to the rich appearance of the interior.

The transmission lock which reduces the cost of theft insurance to Light-Six owners, and standard non-skid cord tires all around are examples of the completeness of equipment of the Coupe-Roadster.

Under the rear deck is a generous luggage space with an opening sufficiently large to admit big, bulky packages or salesmen's samples.

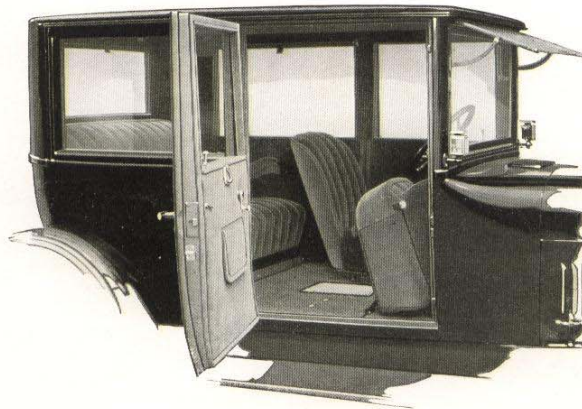
The powerful, smooth-running motor has won recognition everywhere for its virtual freedom from vibration, its power and smooth, quiet operation, reliability and economy.

The name Studebaker is assurance of satisfaction.

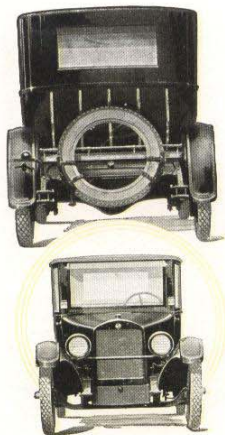


*Rear compartment of the Coupe-Roadster, equipped with a lock and handle, offers ample space for luggage of large size.*

THE STUDEBAKER LIGHT-SIX



THE FIVE PASSENGER COUPE



*Lines of the five-passenger Coupe are impressive and reflect the sturdy construction evident throughout the car.*

THE Light-Six five-passenger Coupe admirably combines Sedan comfort and roominess with the sociability of the Coupe.

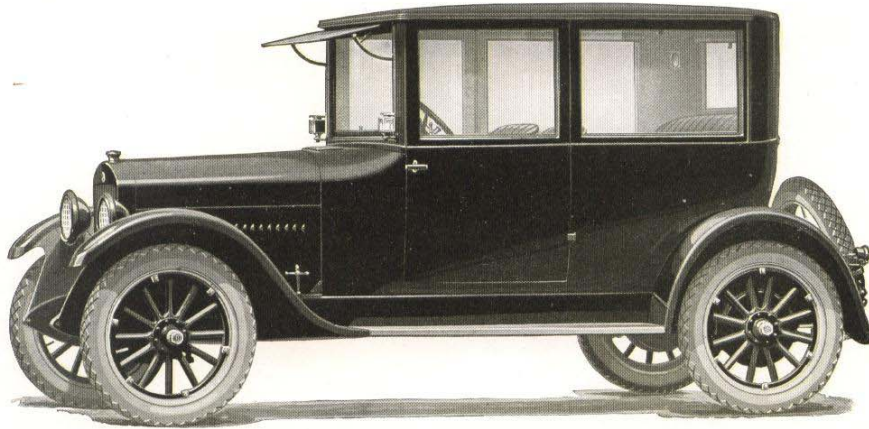
The five-passenger Coupe body is mounted on the standard Light-Six chassis. It is distinguished by its beauty of line, roominess, excellence of body construction and high quality of its equipment.

The rear seat extends clear across the full width of the body, and accommodates three passengers in perfect comfort. The driver's seat and auxiliary seat are identical in design and cushioning. The auxiliary seat is of an improved bucket type and can be folded out of the way when not in use, making it easy and convenient for all passengers to enter or leave the car.

The body is of Studebaker construction and in every detail will be found evidence of the highest quality of materials, specifications of ample dimensions and painstaking craftsmanship. Studebaker's 72 years' experience in building high grade vehicles is reflected throughout this car.

Upholstery is of Chase mohair with top lining, trimming and floor carpets in harmony.

THE STUDEBAKER LIGHT-SIX



THE FIVE-PASSENGER COUPE

The lighting equipment includes distinctive head lights, attractive coach lamps and rear corner reading lights which are operated from the instrument board. The broad rear side and door windows afford wide vision in every direction and are raised and lowered by convenient regulators. All hardware is nickel finished.

The doors are extremely wide and are kept in place while open by disappearing checks. The door on the driver's side is equipped with an inside lock while the right-hand door can be locked from the outside.

A luggage rack at the rear, with nickel-plated rail and aluminum panel guards, adds to the utility of the car.

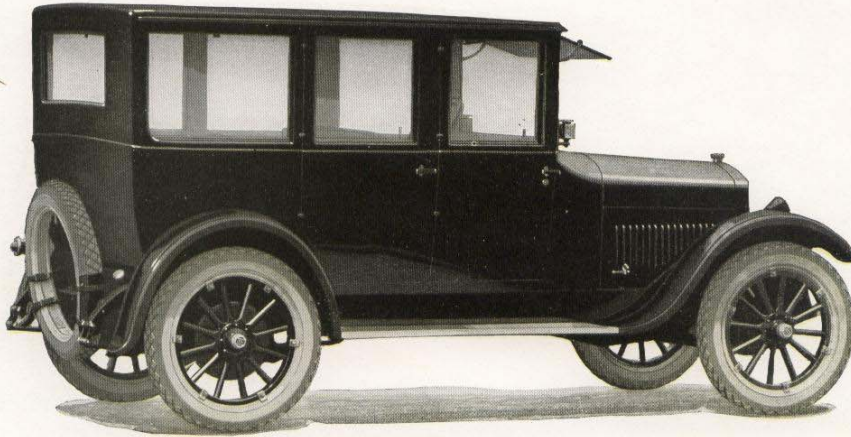
The Light-Six five-passenger Coupe is also equipped with one-piece, rain-proof windshield, which gives clear and unobstructed view of the road ahead; windshield cleaner; built-in, glare-proof, glass visor; quick-action cowl ventilator; high quality heater set flush with the floor; thief-proof transmission lock; eight-day clock; silk roller curtains, and other refinements that contribute to the comfort and convenience of passengers.

Eleven



*The auxiliary seat, identical in design and cushioning with the driver's seat, folds out of the way when not in use.*

T H E S T U D E B A K E R L I G H T - S I X



T H E F I V E - P A S S E N G E R S E D A N

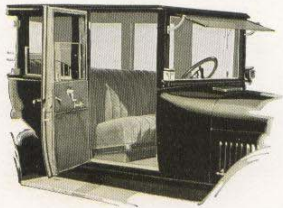
SATISFACTION with a closed car depends largely on the design and construction of the body, the kind and quality of the materials used and the degree of craftsmanship employed.

Inferior materials, put together cheaply to sell rather than to endure, cannot give lasting satisfaction. The building of bodies that are to stand up permanently in service requires quality, materials and workmanship, for which no substitute has been found.

The Light-Six Sedan body is an admirable example of Studebaker craftsmanship. From the building of the framework or "skeleton" until the final coat of paint is applied, every operation is with the thought of permanence. Studebaker has been building quality vehicles for seventy-two years.

Four wide-opening doors, hung on sturdy malleable iron hinges, permit easy movement in or out of the car, while a heater, set flush with the floor, provides fire-side comfort in cold weather.

The Sedan is attractively upholstered in Chase mohair and, with wide, deep, restful cushions and

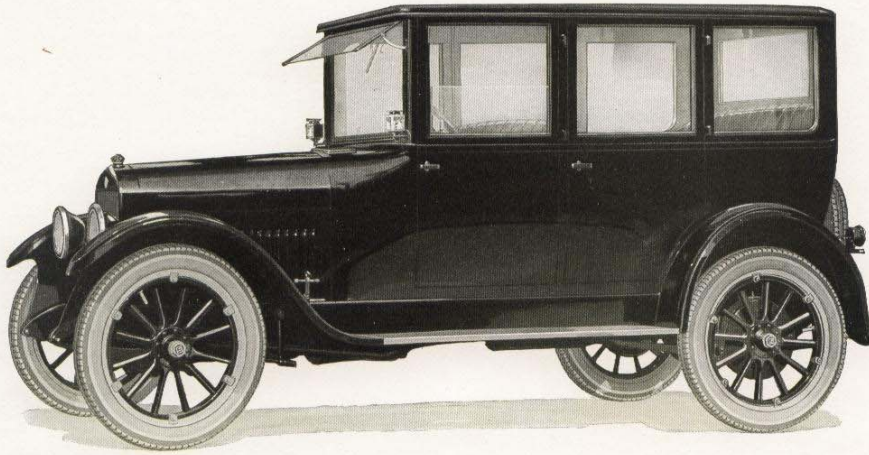


*Four wide-opening doors which make it easy and convenient to enter or leave the car are a desirable feature of the Sedan*

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THE STUDEBAKER LIGHT-SIX



THE FIVE-PASSENGER SEDAN

long, strong, semi-elliptic springs, front and rear, thorough comfort is insured.

The one-piece, rain-proof windshield, dome light and handsome side coach lamps, windshield cleaner, glare-proof visor and the thief-proof transmission lock which reduces the rate of theft insurance to the Light-Six owner 15 to 20 per cent, are appointments that will add to the satisfaction of the owner. The Sedan is also equipped with inside locks on three doors and an outside lock on the right-hand front door.

Vibration, which is so annoying particularly in closed cars, is practically eliminated and the motor is known for its power, flexibility and quietness just as it is for its dependability and economy.

With the excellence of the body construction and the recognized reliability of the chassis, its beauty of line and finish and good taste in appointments, the Sedan is the ideal family car and at its low price represents a value not duplicated in the market.

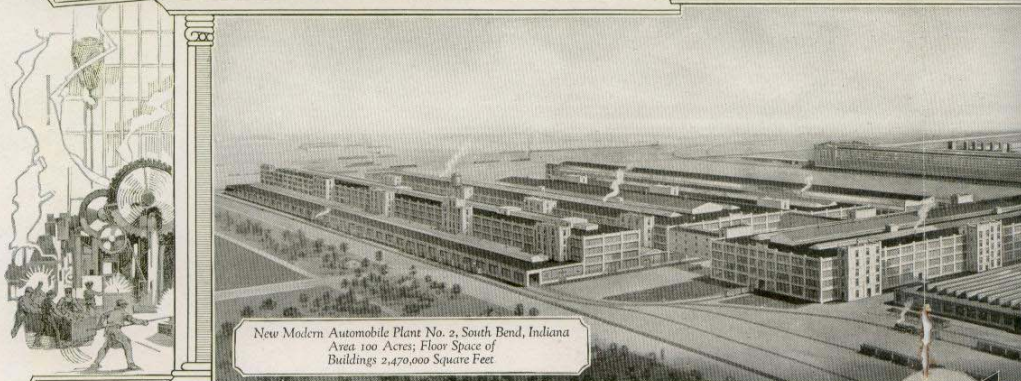
The name Studebaker on closed cars stands for stability of body as well as chassis. It will never appear on a makeshift job.



*The seat cushions of the Sedan, of generous dimensions, are upholstered in Chase mohair with trimmings in harmony.*



Plants Nos. 5 and 10, Detroit, Michigan  
Area 10 Acres; Floor Space of  
Buildings 700,000 Square Feet



New Modern Automobile Plant No. 2, South Bend, Indiana  
Area 100 Acres; Floor Space of  
Buildings 2,470,000 Square Feet

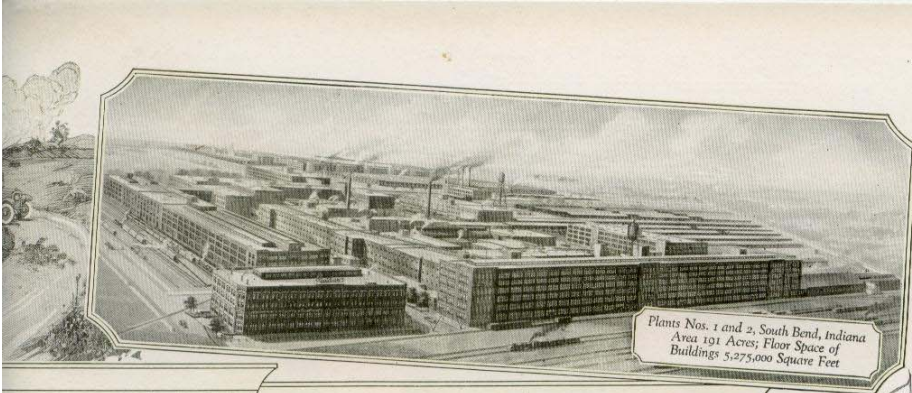


Plants Nos. 3 and 4, Detroit, Michigan  
Area 17 Acres; Floor Space of  
Buildings 1,130,000 Square Feet

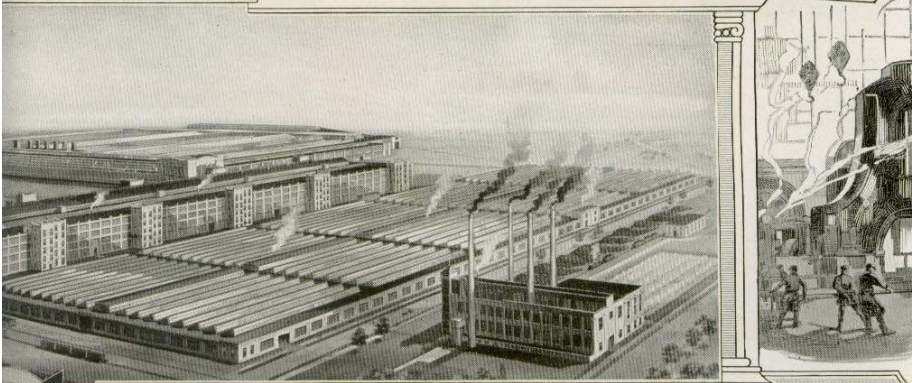
**S**TUDEBAKER automobiles are produced virtually complete in plants which represent the most advanced ideas in factory construction and manufacturing practice. The immense new South Bend plants, in which are manufactured the Light-Six models, reflect the results of six years of exhaustive investigation and study by construction engineers and production men, and are recognized as being among the most modern and efficient manufacturing plants in the world. Studebaker also maintains all of its other plants at this

same degree of modernity, not hesitating to replace old buildings with new ones of advanced construction, or to discard old equipment for new, wherever such action will effect economies in operation and improvement in quality. The Studebaker Manufacturing Division includes a Research Department in which are conducted extensive experiments aimed at developing ever better manufacturing methods. Such new methods, once their worth is established, are immediately adopted, a policy made possible by

the Corporation results in 1 of the time In Stud facturing chemical a capable analyses of measure u



Plants Nos. 1 and 2, South Bend, Indiana  
Area 191 Acres; Floor Space of  
Buildings 5,275,000 Square Feet



Plant No. 7, Canadian Division  
Walkerville, Ontario

the Corporation's great financial resources and one which results in its manufacturing practices being always abreast of the times.

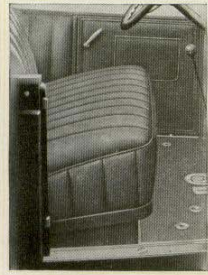
In Studebaker plants no department of modern manufacturing has been overlooked. Completely equipped chemical and physical laboratories are maintained, in which a capable staff of engineers and chemists make tests and analyses of all materials, insuring the use only of those which measure up to Studebaker's high standards. The latest

equipment for heat treating and carbonizing steel is in use; there are ample railway and track facilities for shipping; restaurants, locker rooms and shower baths are provided for employees; in all respects the plants are completely equipped.

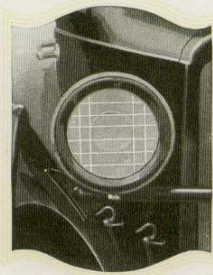
These, in part, are the facts which bear out the truth of the statement that Studebaker, with \$50,000,000 of plant facilities, stands unsurpassed in ability and resources to manufacture economically and give the greatest intrinsic value possible for a given price.

THE STUDEBAKER LIGHT-SIX

OPEN-CAR REFINEMENTS



The wide, deep cushions are upholstered in genuine leather and are placed at the exact angle for most restful riding.



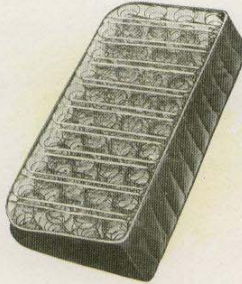
The headlamps are substantial and good looking and are mounted on a rigid tubular brace which extends between the front fenders.



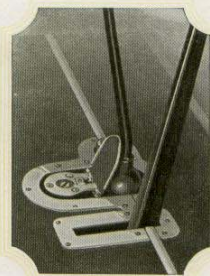
The one-piece, rain-proof windshield provides clear vision. Cowl ventilator. Attractive cowl lights in the windshield base.



A nickel-plated hand and robe rail extends across width of seat. The carpet-covered foot rest is mounted on aluminum brackets.



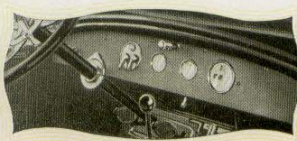
Genuine leather seat cushions, with their many sets of strong, spiral springs, are constructed to give lasting comfort.



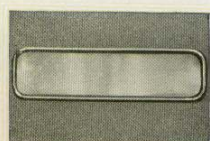
The thief-proof transmission lock reduces the cost of theft insurance to Light-Six owners fifteen to twenty per cent.



The lines of the Touring Car radiator are graceful, yet reflect the sturdiness of construction that is evident throughout the car.



The instruments are conveniently grouped on a walnut-finished, steel instrument board reinforced with wood to prevent noise.



The one-piece rear curtain (no seams) carries a large rectangular glass window which is bound by an enameled moulding.

THE STUDEBAKER LIGHT-SIX

CLOSED-CAR REFINEMENTS



Completeness of Closed Cars is enhanced by one-piece rain-proof windshield with glare-proof visor and windshield cleaner.



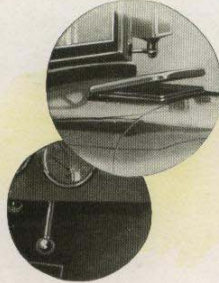
The Sedan and five-passenger Coupe are equipped with heater. The Sedan also has convenient foot rest for rear seat passengers.



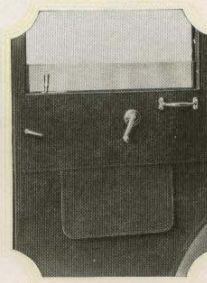
The long gear shift and emergency brake levers are within easy reach of the driver, as are the other controls and the instrument board.



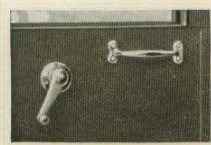
The dome light, broad windows and deep, restful upholstery of Chase mohair are desirable features of the Sedan.



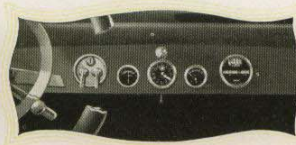
The large cowlf ventilator, of the quick-action type, is opened or closed by simply pulling the regulator backward or forward.



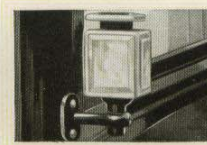
The four wide-opening doors of the Sedan (two in other closed cars) provide rare ease and convenience in getting in or out.



The broad windows in the doors are raised or lowered to the exact position desired by simple and convenient window lifts.



A high-grade eight-day clock, beneath the instrument board light, is one of the many desirable features of the closed car equipment.



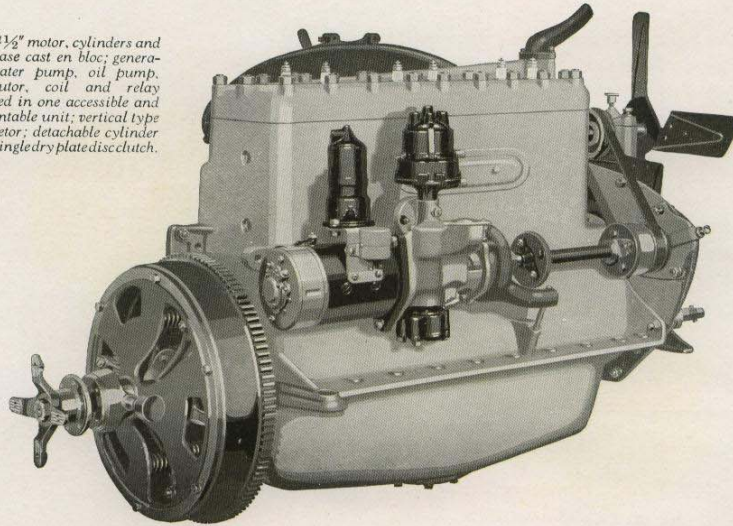
The coach lamps, with windows of heavy beveled glass, add to the utility as well as the distinctive appearance of the enclosed cars.

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THE STUDEBAKER LIGHT-SIX

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*3 1/8" x 4 1/2" motor, cylinders and crankcase cast en bloc; generator, water pump, oil pump, distributor, coil and relay mounted in one accessible and demountable unit; vertical type carburetor; detachable cylinder head; single dry plate disc clutch.*



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## *Mechanical Features*

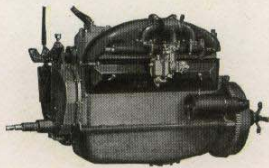
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### *The Engine*

ORIGINAL and refined design, developed from sound and tried engineering principles, is the outstanding feature of the LIGHT-SIX engine.

In general it embodies the latest improvements and advancements in engine construction. It is suspended at three points, is of an improved L-head type having inclined valves, cylinders cast en bloc integral with upper half of crankcase, detachable

*Clean, accessible left side of motor showing aluminum timing gear case; exhaust and inlet manifold; valve cover plate; starter with Bendix gear drive.*



*Eighteen*

## THE STUDEBAKER LIGHT-SIX

cylinder head, and completely machined combustion chambers. The rated horsepower is 35 to 40, the bore being  $3\frac{1}{8}$ " , and the stroke  $4\frac{1}{2}$ " .

Maximum strength and rigidity are obtained by casting the cylinder block integral with the upper half of the crankcase. The detachable cylinder head makes the interior of the engine quickly and easily accessible and likewise permits complete machining of the compact combustion chambers. Machining the combustion chambers insures uniformity of compression, reduces heat absorption, and aids materially in preventing carbon deposits on the cylinder walls.

### *Carburetion*

The subject of carburetion has been a matter of careful study in Studebaker cars. Through exhaustive laboratory and road tests, the carburetor and the new "hot-spot" manifold have been designed to secure good performance with the present day low-grade fuel.

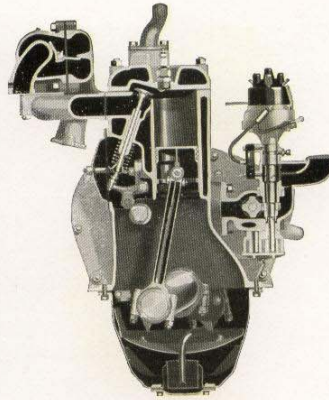
### *Crankshaft and Main Bearings*

The crankshaft and crankshaft bearings are unusually large. Their size contributes to the rigidity of the engine and is an important factor in the reduction and practical elimination of vibration at all speeds. The crankshaft is in exact balance at all speeds.

### *Crankshaft and Connecting Rods Completely Machined*

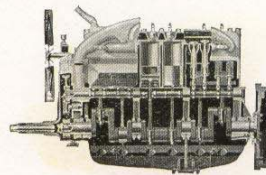
The crankshaft and connecting rods are machined on all surfaces. This practice insures

*Nineteen*

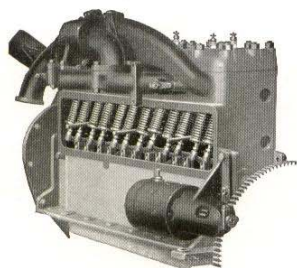


*Sectional end view of motor bringing out clearly simplicity of construction and the relation of its various parts to each other.*

*Long ten-inch completely machined connecting rods; large, rigid, completely machined crankshaft with large bearings; oil reservoir.*



## THE STUDEBAKER LIGHT-SIX



*Valves inclined at 20-degree angle; mechanism accessible; bell crank lift instead of mushroom push rods gives 5-16" valve lift from 3-16" cam lift.*

exact balance and uniform weight of reciprocating and rotating parts, resulting in a smoothness, quietness of operation, and freedom from vibration at all speeds, which is remarkable. Completely machined crankshafts and connecting rods will not be found in any other moderate priced car yet produced.

### *Connecting Rods and Pistons*

The connecting rods are of two-bolt type and are 10" long—an unusual length for a 4½" stroke. These long rods minimize wear on the pistons and cylinder walls and insure a better balance and longer life to the engine. Pistons are cast iron, reenforced, very light, and carry four rings.

### *Valves and Valve Mechanism*

Valves of the standard cast-iron type are inclined toward the center of the cylinder at an angle of 20°. This inclination aids the free passage of gases to and from the cylinder, makes possible a more compact and symmetrical combustion chamber, and in addition thereto renders the whole valve operating mechanism much more accessible. The valve mechanism consists of a bell-crank lever with roller contact to cam, and with adjusting screw to valve stem. The bell-crank lever gives a maximum valve lift from minimum cam lift and insures quicker opening and better timing. The roller contacts to cams are quiet to a degree not obtainable when the usual push rods are used.

*The timing gears are driven by silent chain; lubricated by oil pumped from crankcase; accessible outside adjustment.*



### *Front Drive*

The camshaft on the left side of the engine, and the accessory shaft on the right, are driven from the

## THE STUDEBAKER LIGHT-SIX

crankshaft, at the front end, by a silent chain. The substitution of chain for timing gears contributes to the remarkable quietness of the engine. The chain runs in an oil bath fed by the oil pressure pump, and lubrication is positive. Quick adjustment may be made without removing the gearcase cover.

### *Cooling System*

The cooling system of the Studebaker LIGHT-SIX includes a uniform and efficient water-jacket in the cylinder and cylinderhead castings, a tubular radiator made of copper, of high heat-dissipating capacity, and proof against corrosion, a centrifugal pump driven by the accessory shaft regulating the force of the circulation according to the engine's speed.

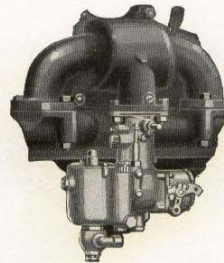
### *Lubrication*

Engine lubrication in the Studebaker LIGHT-SIX is absolutely automatic. It may be simply described as a duplex system of positive feed to crankshaft and camshaft bearings and to front end drive, and the conventional splash feed to pistons and connecting-rod bearings and to accessories.

### *Accessory Unit*

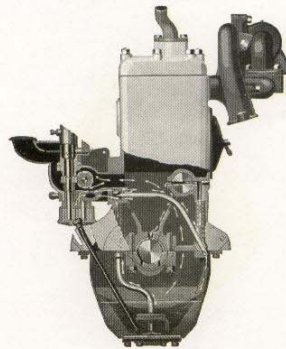
All accessories, including oil pump, water pump, generator, relay, coil, distributor and automatic spark control have been combined into a convenient and compact accessory unit, mounted on a single base,

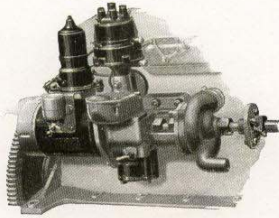
*Twenty-one*



*The manifold with its improved hot spot is responsible for the power, flexibility and recognized economy of the LIGHT-SIX motor.*

*Splash and positive lubrication system is absolutely automatic. Operated by gear pump driven by accessory shaft.*





Another Studebaker improvement — a compact accessory unit, which is conveniently located on right side of engine.

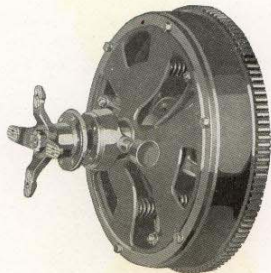
placed on the right side of the engine. The accessories are easily and quickly reached and may be removed individually or as a unit. They are lubricated by splash through an opening in the side of the crankcase over which their base is mounted.

### *Electrical System*

The starting and lighting generator is a part of the accessory unit, as are also the distributor and coil of the storage battery ignition. The electric starting motor engages the flywheel through a Bendix gear, which is positive in action, and which cannot mesh with the teeth on the flywheel when the engine is running.

### *The Clutch*

The clutch is of the single plate dry disc type in which the driven member is a single spider rotating between two rings of friction material. Six separate springs maintain uniform pressure between the friction surfaces.



The single plate dry disc clutch makes gear shifting quiet and easy. Clutch brake serves to prevent spinning of transmission gears after clutch is disengaged.

The release mechanism consists of a series of levers equalized so as to center the pressure separating the friction surfaces, when the clutch pedal is depressed. A clutch brake serves to prevent spinning of transmission gears after the clutch is disengaged, making gear shifting quiet and easy.

### *Transmission*

The transmission is a separate unit supported at three points on an extension of the engine sub-frame.

## THE STUDEBAKER LIGHT-SIX

It is simple, light, and accessible. Its location aids in a proper balance of the weight of the car. There are three speeds forward and reverse. All gears and spline shafts are of oil-treated special alloy steel. Shafts are carried on four Timken tapered adjustable roller bearings.

The transmission is equipped with a lock by which gears are held in a neutral position and cannot be shifted. This lock has been approved by the Board of Associated Insurance Underwriters.

### *Axles*

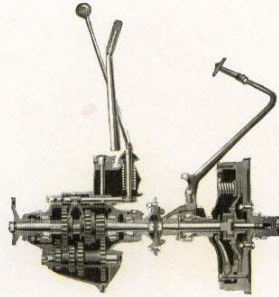
The front axle is a one-piece alloy steel drop forging, scientifically heat-treated, and very strong and tough. The steering knuckles, steering arm, etc., are also alloy steel drop forgings, heat-treated to provide ample factors of safety for the severe shocks to which they may be subjected.

The rear axle is of the semi-floating type successfully used in all Studebaker cars. The wheels are rigidly keyed to the axle shafts which carry the load, and which are mounted directly on large Timken tapered roller bearings in each end of the axle housing. The inner or splined ends of the axle shafts are supported by the differential bearings, which are likewise of the Timken tapered roller type.

Driving pinion and ring gear are of chrome-nickel steel of the improved spiral bevel type, which insures quiet operation.

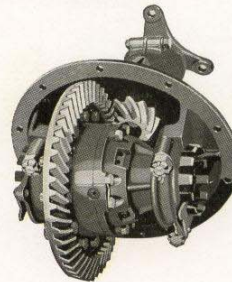
The rear axle pinion carrier is a self-contained unit, including the driving pinion and differential bearings, and may be removed without taking the axle from the car.

*Twenty-three*

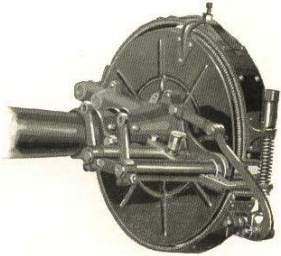


*Single plate dry disc clutch; flexible coupling; gears and spline shafts of highest grade oil-treated alloy steel; equipped with four Timken tapered adjustable roller bearings.*

*The rear axle pinion carrier may be removed without taking the axle from the car. Gears are drop forged chrome nickel steel.*



THE STUDEBAKER LIGHT-SIX



*Extra large diameter brakes; easy to operate and positive in action. One set internal expanding, and the other external contracting, readily accessible.*

*Drive and Springs*

Drive is of the usual Hotchkiss type through the rear springs without torque arms or radius rods. Front and rear springs are both of semi-elliptic type. All spring eyes are bronze-bushed.

All springs are of alloy steel and of exceptional strength. They are the result of careful experimentation and test.

*Frame*

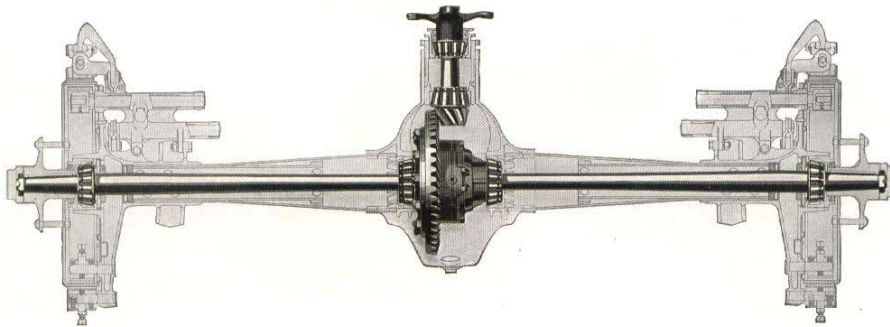
The chassis frame is deep and strong, narrow at the front to allow a short turning radius, and wide at the rear conforming to the natural lines of body sills. The side members are straight and are tied together by five cross-members.

It is of staunch construction, designed with a large factor of safety. The side sections have a maximum depth of six inches and a thickness of one-eighth inch.

*Brakes*

Large safety factors have been given to brakes. One set internal and the other external are of ample

*Large, tapered axle shafts of the best alloy steel; spiral bevel pinion and ring gear of alloy steel; six adjustable Timken tapered roller bearings are used at vital points.*



*Twenty-four*

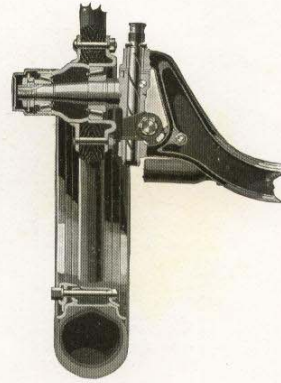
T H E S T U D E B A K E R L I G H T - S I X

proportion, and are simple of adjustment and readily accessible. Leverages are large and brake mechanism is powerful and easy.

*Chassis and Chassis Mechanism*

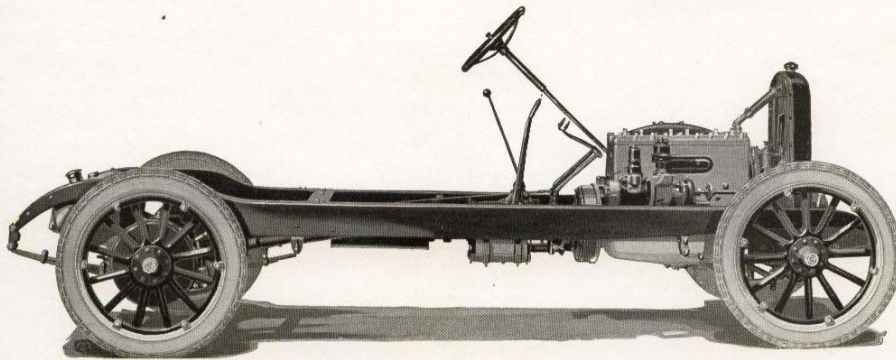
The chassis and chassis mechanism of the Studebaker LIGHT-SIX is distinguished by its simple and clean-cut design. Sturdiness and safety factors sufficient for extreme road conditions have been combined with the latest advancements in chassis engineering to produce a mechanical efficiency comparable with that of the engine itself.

The chassis mechanism of the LIGHT-SIX is efficient because it is correctly designed in its elements, and co-related as a whole. Angularity of drive and friction have been reduced to a minimum. The mechanical effects of gear reduction and wheel size have been carefully studied, and scientifically as well as practically determined. Weight of the car has been a fixed element of design. The result is a motor car of remarkable performance.



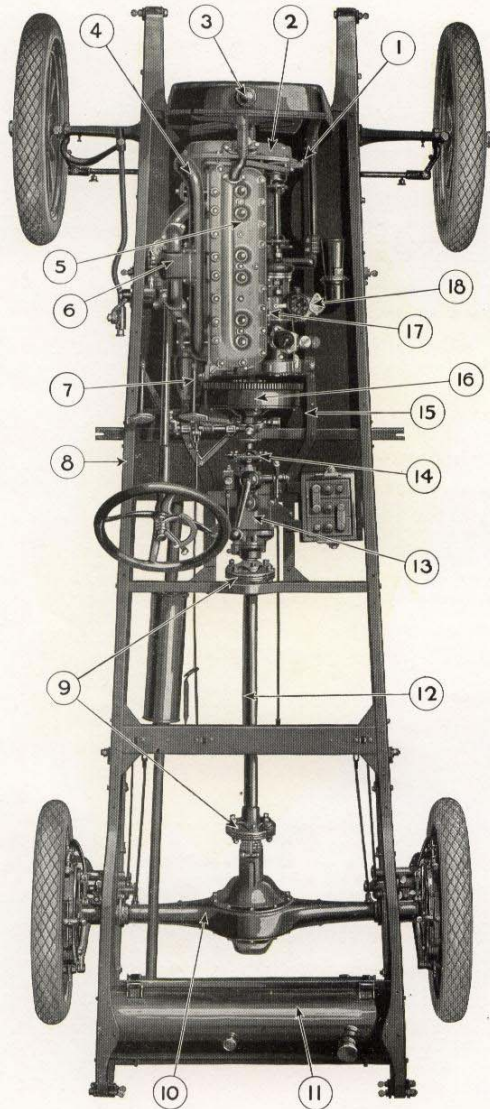
*Steering knuckles, steering arm, etc., are alloy steel drop forgings, heat-treated to provide factors of safety for the shocks to which they may be subjected.*

*Side view chassis; 6" tapering, straight side frame; wheelbase 112 inches; 3 1/4-inch cord tires; chassis perfectly balanced; semi-elliptic springs.*



*Twenty-five*

THE STUDEBAKER LIGHT-SIX



*Plan View of Chassis*

1. Silent chain adjusting nut.
2. Aluminum timing gear case.
3. Radiator filler cap.
4. Exhaust manifold.
5. Detachable cylinder head.
6. Inlet manifold with hot spot.
7. Starting motor and Bendix drive.
8. Deep channel section straight side frame.
9. Flexible disc universal joints, requiring no lubrication.
10. Pressed steel rear axle housing.
11. 15-gallon gasoline tank with protecting shield.
12. Tubular propeller shaft.
13. Transmission suspended at three points on sub-frame.
14. Flexible disc coupling between clutch and transmission.
15. Sub-frame carrying engine, clutch, and transmission.
16. Flywheel containing single plate dry disc clutch.
17. Accessory unit comprising generator, water pump, oil pump, distributor, coil, and relay.
18. Oil filler pipe.

## S P E C I F I C A T I O N S

### T O U R I N G C A R

SEATING CAPACITY—Five passengers.

WHEELBASE—112 inches.

WEIGHT—2,650 pounds.

MOTOR—Six cylinders,  $3\frac{1}{8}$ " x  $4\frac{1}{2}$ ", cast en bloc, with upper half of crankcase cast integral; detachable cylinder head; 40 horsepower; three-point suspension; valves set at an angle of 20 degrees silently operated by bell-crank construction; three timing gears driven by silent chain, with convenient outside adjustment; 10° connecting rods; 4 bearing crankshaft; connecting rods and crankshaft machined on all surfaces.

LUBRICATION—Splash and positive distribution.

COOLING SYSTEM—Centrifugal pump circulating system; tubular radiator; four-blade fan.

GASOLINE SYSTEM—Vacuum feed with 15-gallon tank in rear, hung from a protecting shield.

CARBURETION—Vertical type carburetor and intake manifold with hot spot.

ELECTRIC SYSTEM—Double unit generator and starter; Bendix drive.

IGNITION—Battery; semi-automatic spark control.

ELECTRIC LIGHTS—Large headlights with improved deflecting lenses; cowl lights; speedometer light; tail light.

CLUTCH—Single disc, dry plate type.

TRANSMISSION—Separate unit mounted on sub-frame; three speeds forward and reverse. Thief-proof transmission lock.

GEAR RATIO—4.55 to 1.

PROPULSION—Tubular propeller shaft with two flexible disc universal joints.

REAR AXLE—Improved semi-floating; spiral bevel gear drive; full Timken tapered roller bearing equipment.

DRIVE—Hotchkiss.

SPRINGS—Front and rear semi-elliptic; front 36 x 2 inches, 7 leaves; rear 50 x 2 inches, 7 leaves, underslung.

TIRES—Standard cord, 31 x 4 inches, non-skid all around.

BRAKES—Foot brake, external contracting,  $14\frac{1}{8}$  x 2 inches; emergency brake, internal expanding,  $13\frac{3}{4}$  x  $1\frac{3}{4}$  inches.

LOCKS—Built-in, thief-proof transmission and ignition locks.

FENDERS—Heavy pressed steel, oval-crown design—beaded.

UPHOLSTERY—Genuine leather, French plaited.

TOURING CAR TOP—One-man Gypsy type, large rectangular glass window in rear; door curtains, bound on three sides by steel rods, open with doors.

EQUIPMENT—One-piece, rain-proof windshield; electric horn; cowl lights; electrically-lighted walnut-finished instrument board, on which are mounted carburetor choke, light and ignition switch, oil indicator, speedometer driven from propeller shaft, ammeter; ventilator in cowl; combination robe and hand rail across back of front seat; outside and inside door handles; carpet-covered foot rest in tonneau; gasoline gauge; complete set of tools; tire carrier in rear with extra rim.

MODELS—Five-passenger Touring Car; three-passenger Roadster; two-passenger Coupe-Roadster; five-passenger Coupe; five-passenger Sedan.

*Studebaker reserves the right to make changes in design or add improvements to its automobiles at any time without incurring any obligation to install same on automobiles previously manufactured*

## STUDEBAKER HISTORY, RESOURCES AND POLICY

**History.** The Studebaker business was established at South Bend, Indiana, in the year of 1852, and has operated continuously for seventy-two years. For two generations, Studebaker was the world's largest manufacturer of horse-drawn vehicles, which business it liquidated in 1919-1920. It began experimenting with a "horseless vehicle" in 1897, and launched into the automobile business in 1902, producing electric, and later in 1904, gasoline propelled vehicles. Incorporated as The Studebaker Corporation in 1911.

Studebaker has been a consistent leader in advancing the standards of automobile design, quality and value. The first six-cylinder motor cast en bloc was made by Studebaker, and cord tires as standard equipment were first adopted on Studebaker cars. First quantity manufacturer to design and produce bodies of the highest grade, completely equipped with fittings of the highest quality, in both open and closed models.

More than 750,000 Studebaker cars, exceeding one billion dollars at wholesale prices, have been produced and sold. Each year for the past six years, sales have greatly exceeded those of the previous year. Over 145,000 cars, valued at \$160,000,000, wholesale price, were sold in the year of 1923.

**Financial Resources.** The actual net assets employed in Studebaker business amount to \$90,000,000, against which there is no indebtedness.

Studebaker is the second strongest financially of the individual automobile manufacturers of the world.

**Plant Facilities.** \$50,000,000 is invested in the seven Studebaker plants at South Bend, Detroit, Walkerville, and Chicago, which cover 225 acres and contain 7,500,000 sq. ft. of floor space, and have a manufacturing capacity of 150,000 automobiles per annum.

These plants are modern, scientifically equipped, and employ 20,000 people. Seventy per cent of the total plant capacity has been provided and developed in the past seven years. Research and experimental laboratories employ 125 skilled men, and make 500,000 laboratory tests annually.

12,500 machines used in 500 manufacturing departments. 1,000 inspectors employed in the plants make 30,000 inspections during manufacture before cars are passed for delivery. 1,120 mechanical operations on the three models of Studebaker cars are accurate to one-thousandth of an inch, and 360 to one-half-thousandth of an inch. 150 tons of castings are produced daily in Studebaker foundries and 115,000 tons of steel, 7,000,000 gallons of fuel oil, and 185,000,000 cubic feet of gas are used annually.

Studebaker plants, in cost and size, are the second largest of the world's individual automobile plants.

**Organization.** The ablest engineers, metallurgists, chemists, production experts, inspectors and executives constitute the man power back of the plants, the organization and the product.

Home office, South Bend, Indiana, with 25 branch offices, 5,000 dealers and 3,500 service stations in all civilized countries. These branches and dealers carry in stock \$4,000,000 of repair parts for all models of Studebaker cars. Based on the total number of Studebaker cars in operation in 1923, our sales of repair parts amounted to \$13 per car for repairs covering renewals and also accidents.

**Policy.** The name Studebaker is a household word. The broad principle upon which Studebaker business is conducted, and upon which it has prospered for seventy-two years, now grounded upon tradition, insures satisfaction to everybody who deals with the House of Studebaker.

## QUANTITY AND QUALITY

"There is nothing inherent in quantity production methods that renders maximum quality impossible to attain. Efficient methods need have nothing in common with low quality. This is not always recognized in discussions about the relative merits of American and European cars. High production and lower quality are too commonly thought to go together, simply because some of America's cheap cars are not comparable in quality to the hand-made—and high-priced—European jobs.

"Care in inspection and precision in operation will turn out in quantity a product equal in quality with any made in smaller lots. In fact, the repetition of the same precision operation many times over tends toward greater rather than less accuracy and quality.

"Quality varies with precision of manufacture and care of inspection, but has no inherent relation to the quantity produced. This is a fact that American exporters will do well to impress upon foreign dealers and prospective foreign buyers."

—Editorial from "Automotive Industries,"  
August 24, 1922  
a Recognized Trade Authority

THIS IS A STUDEBAKER YEAR



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