

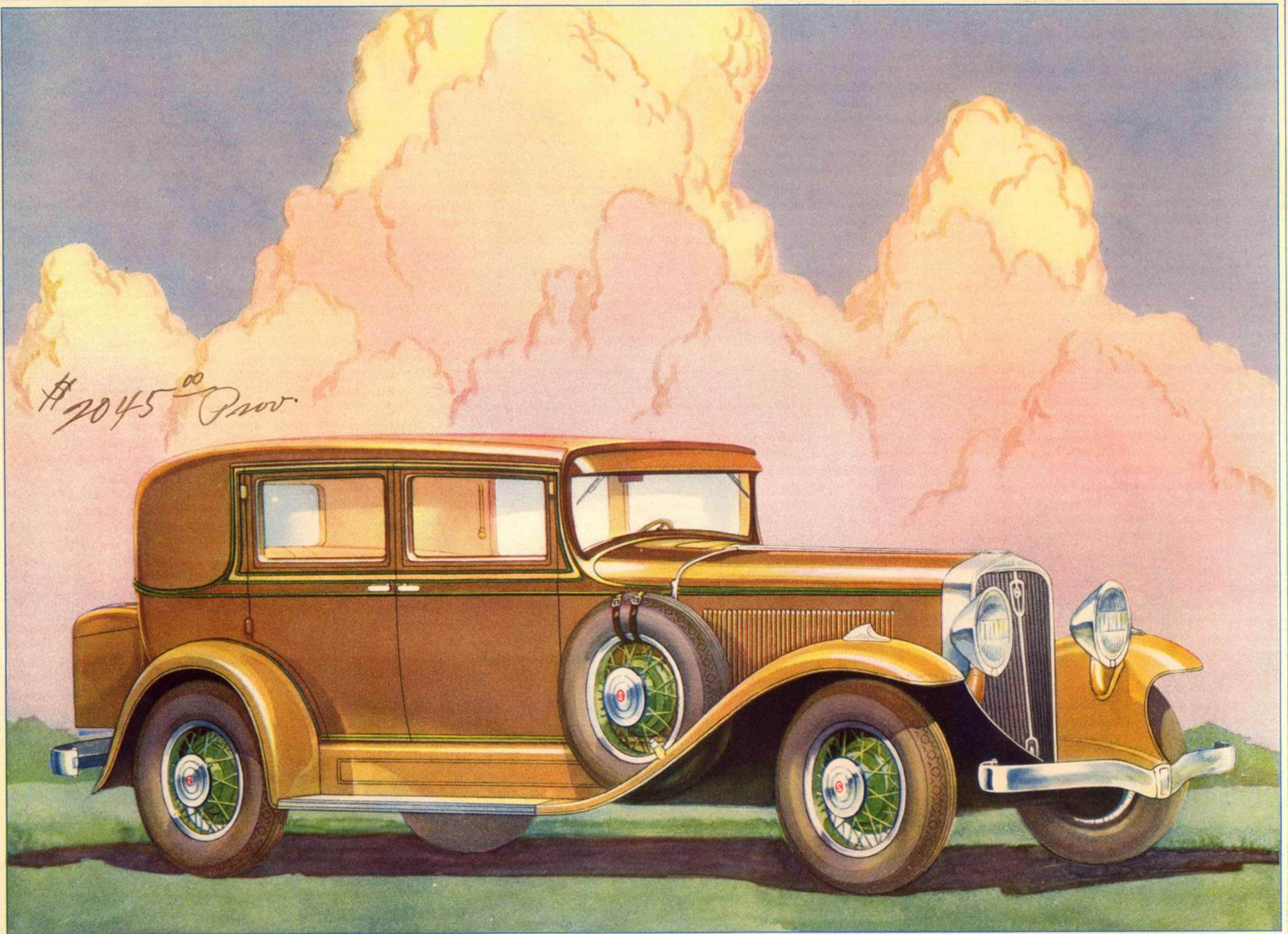


THE  
WORLD FAMOUS  
STUDEBAKER

1931  
COMMANDER  
EIGHT

WITH  
*free wheeling*  
under positive gear control





#2045<sup>00</sup> Prov.

NEW SERIES COMMANDER EIGHT REGAL BROUGHAM FOR FIVE — *with Free Wheeling under Positive Gear Control*  
124-inch wheelbase — 101 horsepower. Six wire wheels and trunk containing suit cases and hat case are standard. Safety glass in all windows.



*free wheeling is here!*

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THE WORLD FAMOUS  
COMMANDER

*A Seasoned Eight*



*by Studebaker*

In the World Famous Commander Eight, a motor car seasoned and certified by millions of miles of service, Studebaker now offers new beauty, still greater power and speed, increased size, *plus Free Wheeling* — an epochal advancement in automotive engineering.

No other manufacturer in the world offers the thrill and thrift of Free Wheeling, under positive gear control.

Devised and perfected by Studebaker, manufactured under Studebaker patents, Free Wheeling makes a car do things that seem like miracles, even to sophisticated automobile engineers.

The New Series Commander Eight is the most unfettered, yet most obedient car in the world — a car that literally floats along, in gear and fully controlled, yet



free and silent as though there were no gears! Yet even when you are free wheeling your clutch is fully engaged and gears are in mesh.

You shift with silence, safety and precision, from high to second, back and forth, at forty, fifty miles an hour — *and never touch the clutch!* In fact, you need never use the clutch except to start or back up!

Free wheeling is a new development in automotive engineering, and one of far-reaching importance. Here is no mere refinement, but a definite *change* in the application of power, which marks a milestone in motoring progress. For the first time in a motor car you get the full benefit of momentum *automatically*. When your car has traveled 10,000 miles, your engine has "worked" only 8,000 miles.

The instant you lift your foot from the throttle, no matter how swiftly you may be traveling, your engine drops to idling speed—momentum carries you along.

The economy of Free Wheeling is remarkable. You save 12 to 20 per cent on gasoline, 20 per cent on oil—and the heavier the traffic, the greater the saving.

Gone entirely are the terrific reversional strains thrown on rear axle, universal joints, clutch and transmission of an ordinary car when you suddenly lift your foot from the throttle.

These decided advantages involve no change in present driving customs. You drive the New Commander just as you do a conventional car. But at least half the footwork of driving is gone.

You are ready in your new Commander Eight, for any emergency of road or traffic, on the instant. With Free Wheeling under positive gear control the full braking power of your engine is available instantly, at all speeds and in all gears — first, second, or high — whenever you desire to use it. The new Duo-Servo brakes provide a smooth and reassuring drop in speed — swift as your need dictates. No sudden grabbing — no swerving.

The new self-righting steering gear holds the course of the car true without your tugging at the wheel. The hard work that usually attends parking becomes but a memory. Tendency to "shimmy," a worry ever since balloon tires were introduced, is overcome by a new kick-shackle device on the left front spring.

To complement and match the thrill and thrift of Free Wheeling, Studebaker engineering genius has overlooked no opportunity to bring the seasoned Commander Eight still nearer to perfection.

The increased power of the seasoned Commander Eight engine will be a revelation to you. Its extra smoothness is made possible by a nine-bearing crank-



shaft. Its remarkable silence is partly due to a new carburetor silencer, another Studebaker development.

Floating at each spring-end on oil-sealed ball bearings, the Commander Eight rides friction-free. There are no squeaks, no rattles, at these vital points—it is necessary to check lubrication only every 20,000 miles.

The New Commander Eight bodies interpret the very spirit of Free Wheeling. Such departures from conventional design as Ovaloid headlamps, parking lights on fenders and Le Modern bumpers make this car as distinctive in appearance as it is in performance. Closed cars are wired for radio installation. Regal models have safety glass throughout.

Because of the increased length of The Commander's low, double-drop frame, bodies are longer, affording more knee room. Seats are wider. Doors and windows are larger, thus contributing not only more actual spaciousness, but a noticeably more impressive appearance.

The new series Commander Eight offers a seasoned time-tried "eight," plus Free Wheeling. It offers tomorrow's motoring advancements today! The broad principle upon which Studebaker business is conducted, and upon which it has prospered for seventy-eight years, now grounded upon tradition, insures satisfaction to everybody who deals with the House of Studebaker.

## STUDEBAKER ENGINEERING LEADERSHIP

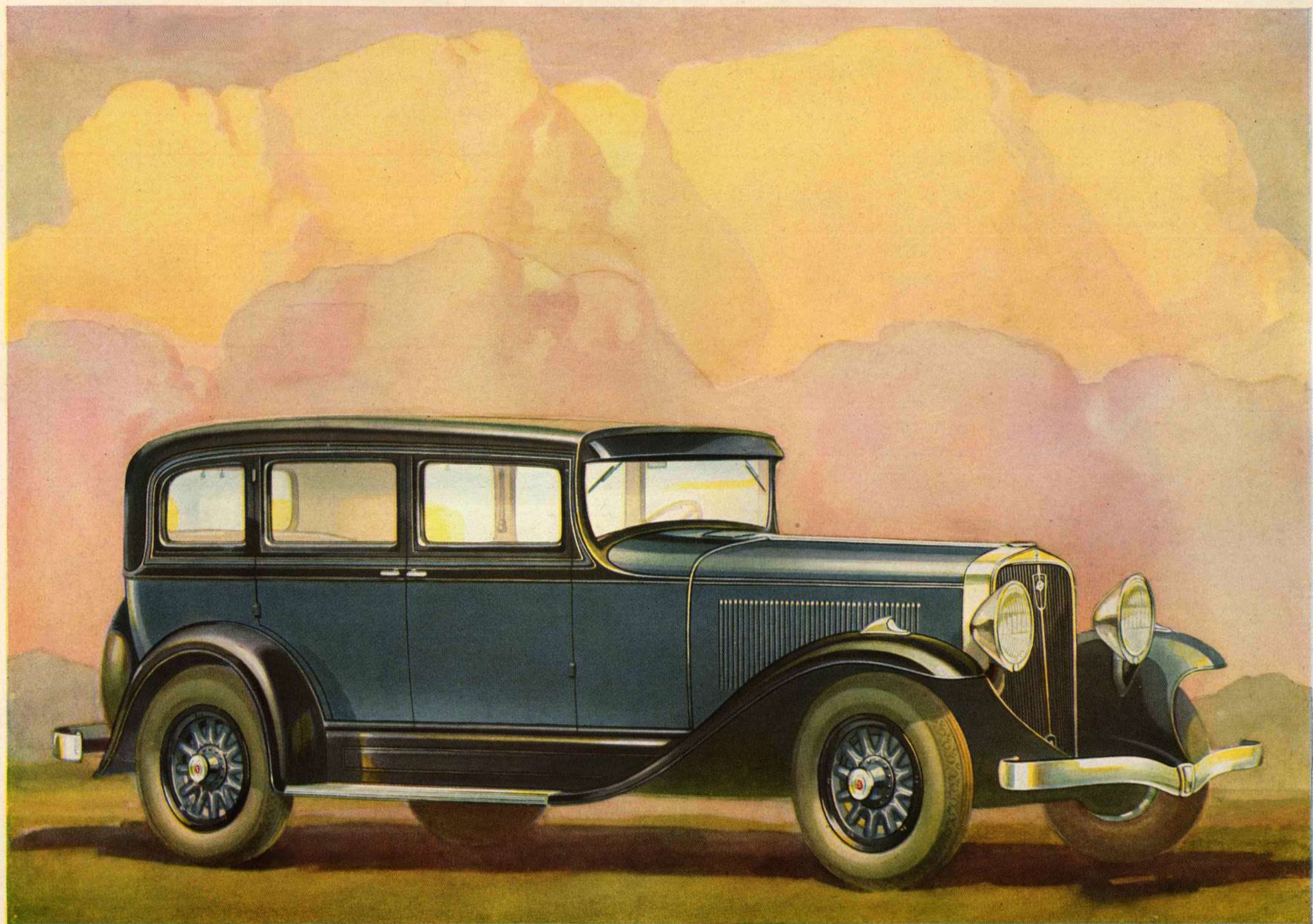
FEATURE OF DESIGN	When Adopted by Studebaker	% Makes Using When Studebaker Adopted	% Makes Using Today†
Steering—Ignition lock	1924	1.9	20.
Balloon Tires	1924	17.8	100.
Eight Cylinder Motor	1927	46.0	71.1
Hydrostatic Gas Gauge	1924	*	95.5
Fuel Pump	1927	2.0	66.6
Ball Bearing Spring Shackles	1928	*	4.4
Full Power Muffler	1930	*	4.4
Lanchester Vibration Damper	1920	1.4	77.7
Four Wheel Brakes	1926	68.1	100.
Oil Filter	1925	6.4	82.2
Timken Bearings	1911	17.1	77.7
Chromium Plating	1927	2.	97.7
Heat Indicator on Dash	1926	13.	62.2
Steel Core Steering Wheel	1928	15.2	44.4
Safety Glass	1928	13.	37.7
Carburetor Silencer	1930	*	4.4
<b>FREE WHEELING</b>	<b>1930</b>	<b>*</b>	<b>STUDE-BAKER ONLY</b>

*Figures above are based on tabulations furnished by automobile trade papers and other authentic sources of information.*

\* Pioneered by Studebaker

† August 1930

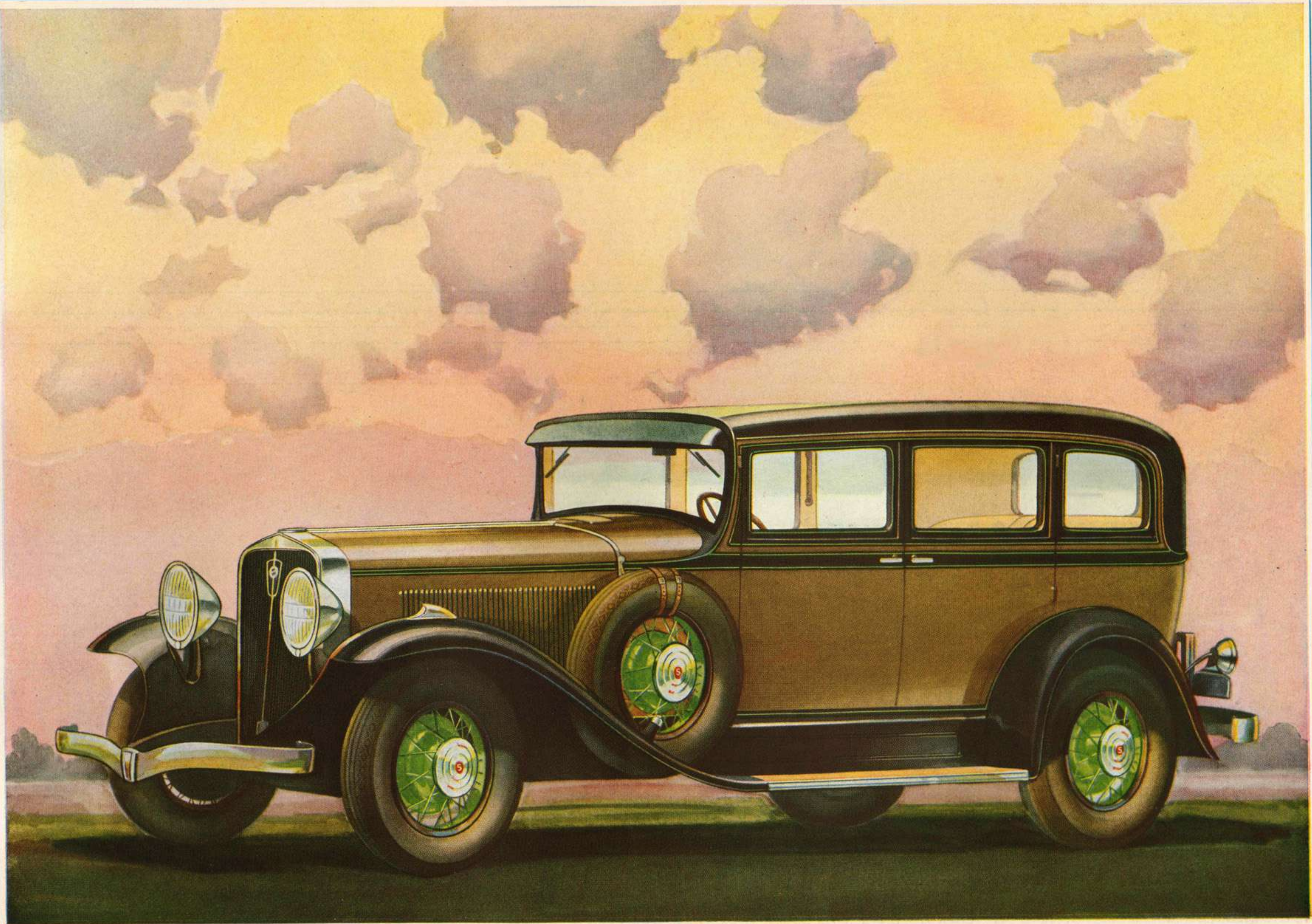




NEW SERIES COMMANDER EIGHT SEDAN FOR FIVE — *with Free Wheeling under Positive Gear Control*

124-inch wheelbase — 101 horsepower. Safety glass windshield. Ball bearing spring shackles. Folding center arm rest in rear.

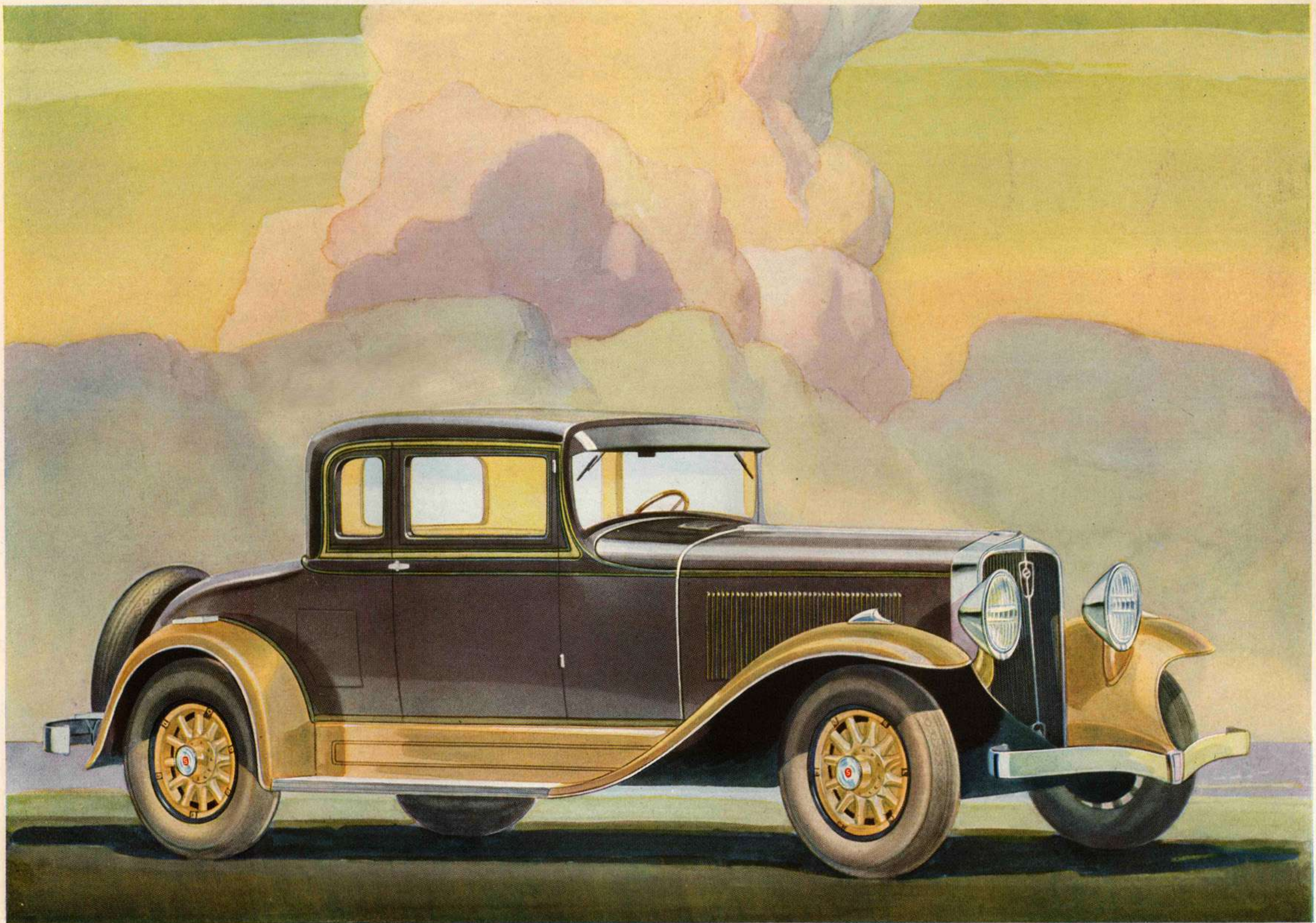




NEW SERIES COMMANDER EIGHT REGAL SEDAN FOR FIVE — *with Free Wheeling under Positive Gear Control*  
124-inch wheelbase — 101 horsepower. Standard equipment includes six wire wheels and luggage grid. Safety glass in all windows.

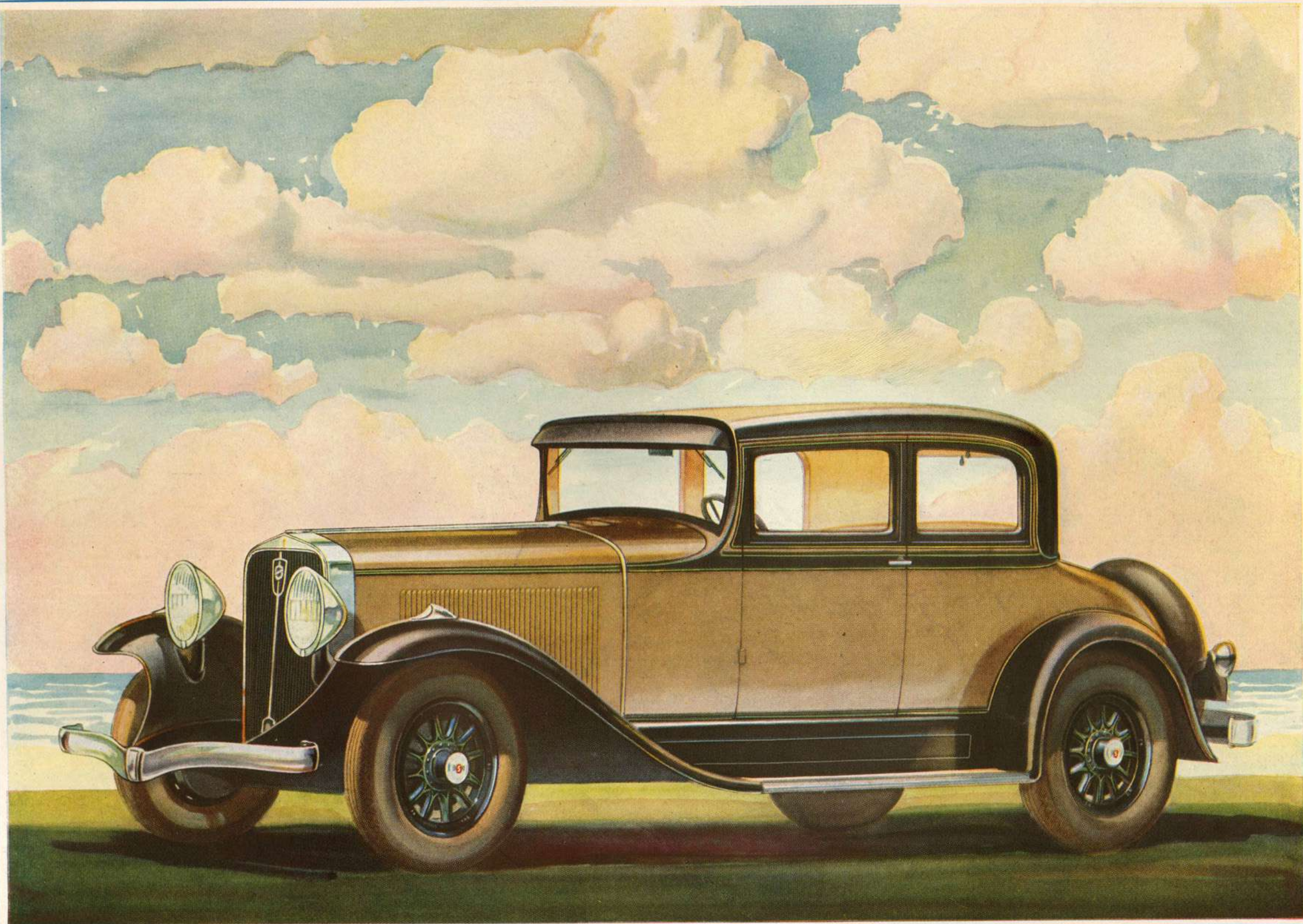


1931



NEW SERIES COMMANDER EIGHT COUPE FOR FOUR — *with Free Wheeling under Positive Gear Control*  
124-inch wheelbase — 101 horsepower. Comfortable rumble seat. Golf club and package compartment, opening back of right door. Safety glass windshield.





NEW SERIES COMMANDER EIGHT VICTORIA FOR FOUR — *with Free Wheeling under Positive Gear Control*  
124-inch wheelbase — 101 horsepower. Package compartment back of driver's seat and commodious luggage compartment at rear. Safety glass windshield.



# THE NEW SERIES COMMANDER EIGHT

*Longer wheelbase, more spacious interiors, greater power, new richness of appointment and --- Free wheeling!*

More Power —  
101 horsepower engine

Longer wheelbase —  
124 inches

Free Wheeling —  
with positive gear control

1. Shift from high to second  
—back and forth—at 40-  
50 miles per hour and  
never touch the clutch

2. Uncannily silent . . . no  
“piling up” when you de-  
celerate

3. Saves 12 to 20% on gas,  
20% on oil . . . reduces  
engine strains, tire wear

4. Greater safety . . . shift at  
any speed . . . less hazard  
of skidding

Bodies longer, wider, more com-  
fortable

Closed bodies wired for radio

Nine-bearing counterbalanced  
crankshaft

New self-righting steering gear

New kick shackle improves  
steering, banishes shimmy

Adjustable steering column

Adjustable front seat

Ball bearing, anti-shimmy  
spring suspension — no lu-  
brication for 20,000 miles at  
a time

Starter button on dash

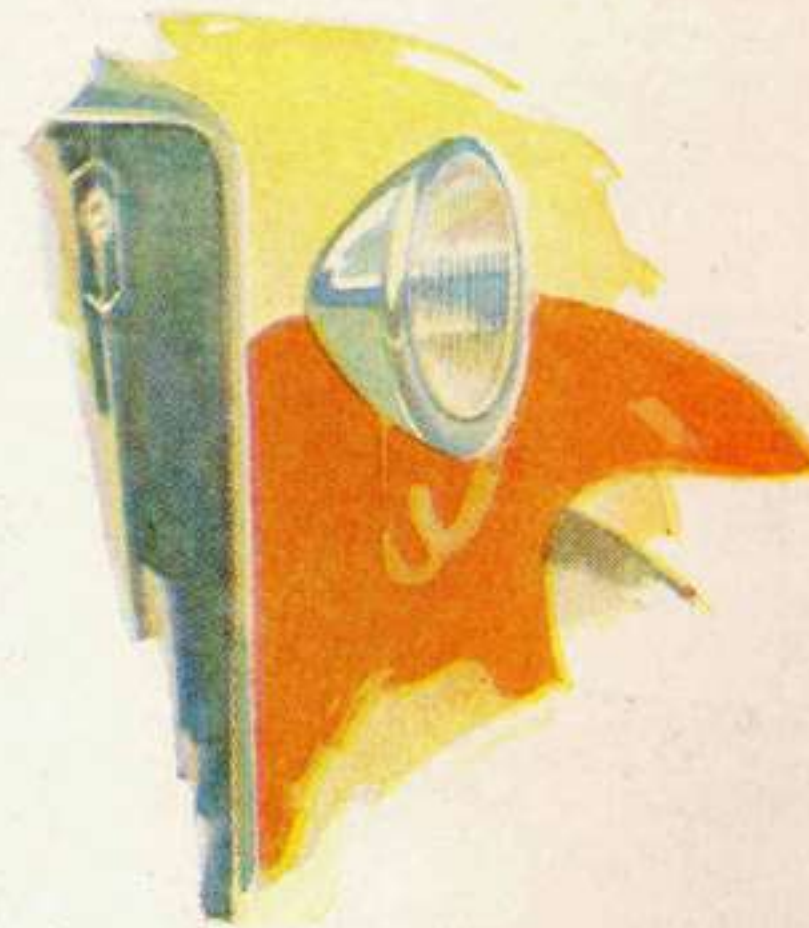
Duo-Servo brakes, with long-  
life molded lining

Hand brake operates on all  
four wheels.

Dual carburetion and improved  
manifolding

Carburetor silencer — elimi-  
nates 90% of motor roar

Double-drop frame — costlier,  
lower, safer, smarter



Thermostatically controlled  
cooling

High turbulence radiator air  
deflectors

Steel-core safety steering wheel  
—new three-spoke type

Safety glass in windshield of  
all models; throughout in  
Regal models

Welded steel, full-vision bodies

Air filter—Oil filter—Gasoline  
filter

Positive pump fuel feed

Hydrostatic gasoline gauge on  
dash

Full-power exhaust muffler, in-  
creases effective horsepower

Rubber engine mountings

Valve spring dampers prevent  
“fluttering” and breakage

Lanchester vibration damper  
with centrifugal governor

Timken roller bearings

Automatic circuit breaker —  
“the watchdog of your elec-  
tric system”

Semi-automatic choke control

Lovejoy hydraulic shock ab-  
sorbers

New Ovaloid headlamps with  
twin-beam tilt-ray action

Coincidental lock to steering-  
ignition

Same key operates all locks

Treadle type accelerator pedal

Floodlight in front compart-  
ment

Engine thermometer on dash

No-glare windshield

Double automatic windshield  
wipers

Tarnish-proof chromium-plated  
bright work

Le Modern bumpers

Drive 40 miles per hour even  
when new—result of preci-  
sion manufacture

Drain engine oil only at 2500-  
mile intervals



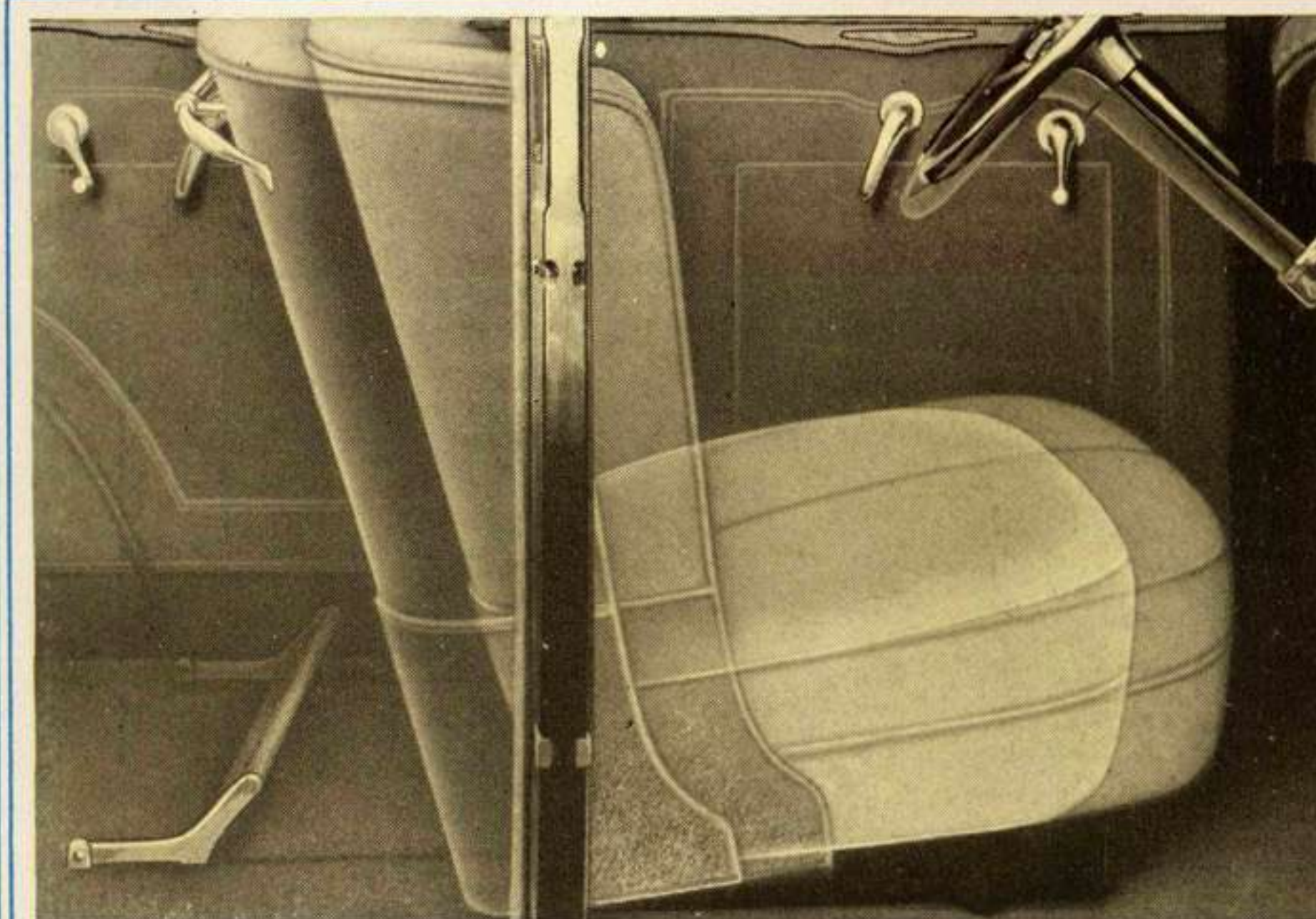


(ABOVE) The Commander's liberal wheelbase provides for a body of roomy dimensions. Matching sumptuous comfort are many refinements, such as center arm rest, ash receiver, and assist cords. All closed models are wired for radio installation.

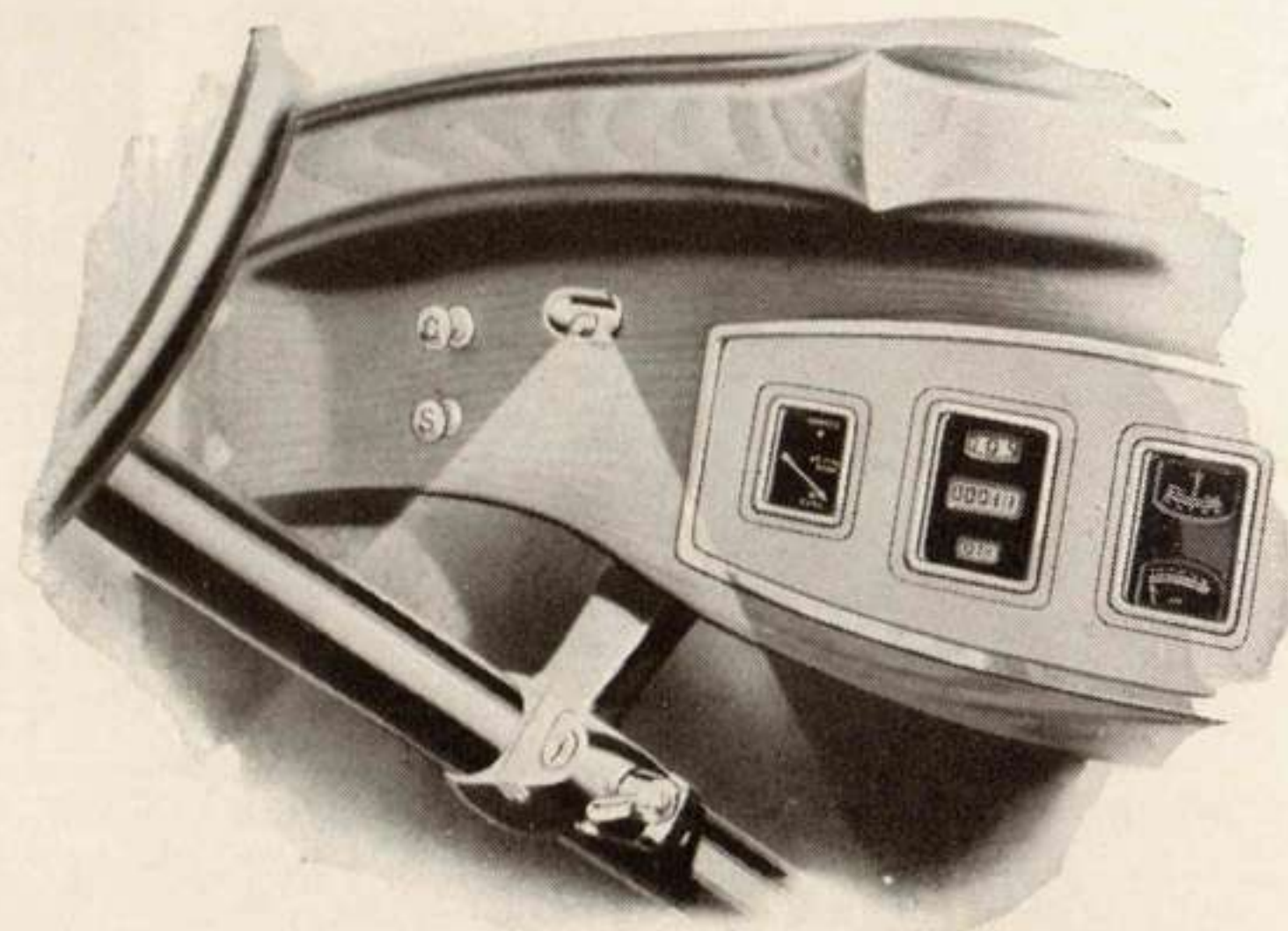


(LEFT) Safety glass in windshields of all models offers an added measure of protection in Commander Eight bodies. In Regal models safety glass is used in side and rear windows as well.

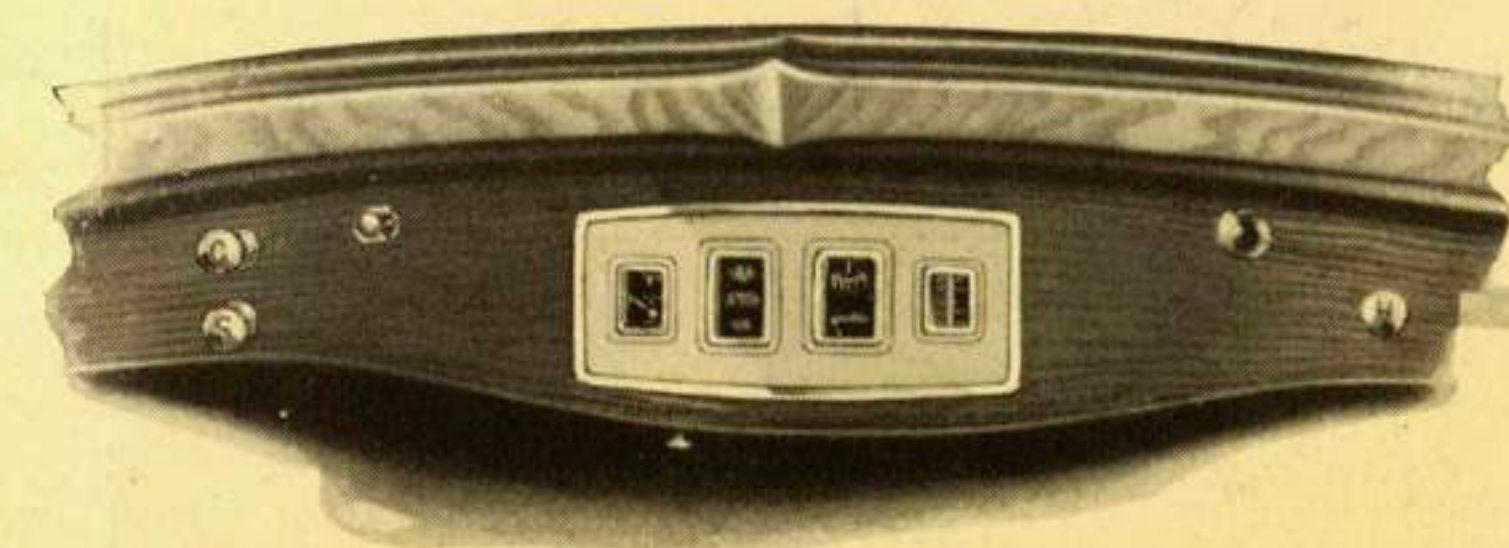
(BELOW) Not only are front seats instantly adjustable to suit your preference, but the steering column may also be adjusted to your "fit."



(RIGHT) An instrument panel of unusual beauty is provided. Instruments include hydrostatic gasoline gauge, engine thermometer, ammeter, speedometer and oil pressure gauge.



(LEFT) For added convenience Studebaker provides a flood light directly above the coincidental lock to ignition and steering which secures lowest theft insurance rates.





### THREE "WATCHDOGS" OF COMMANDER EIGHT ENGINE EFFICIENCY



OIL FILTER



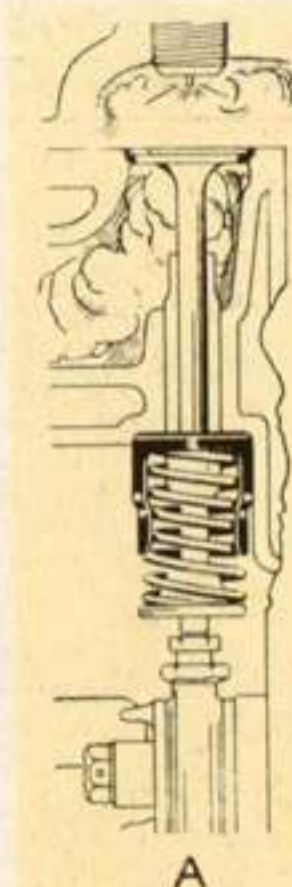
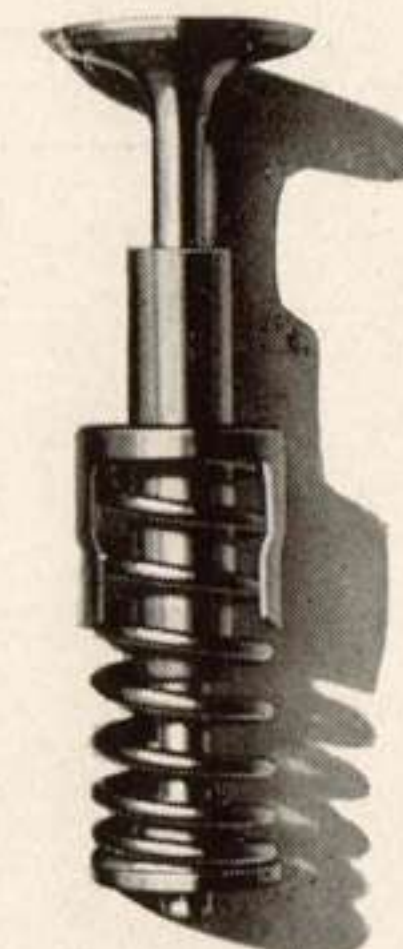
GAS  
FILTER



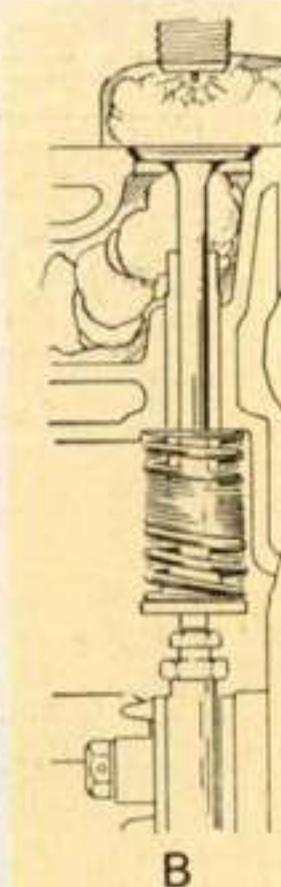
AIR FILTER

(LEFT) Commander Eight engine is rendered dust-proof and dirt-proof by a trio of mechanical "watchdogs." The air cleaner permits only clean, pure air to pass into the carburetor. Only clean gasoline is fed to the carburetor through the gasoline filter. The oil filter keeps the engine oil clean.

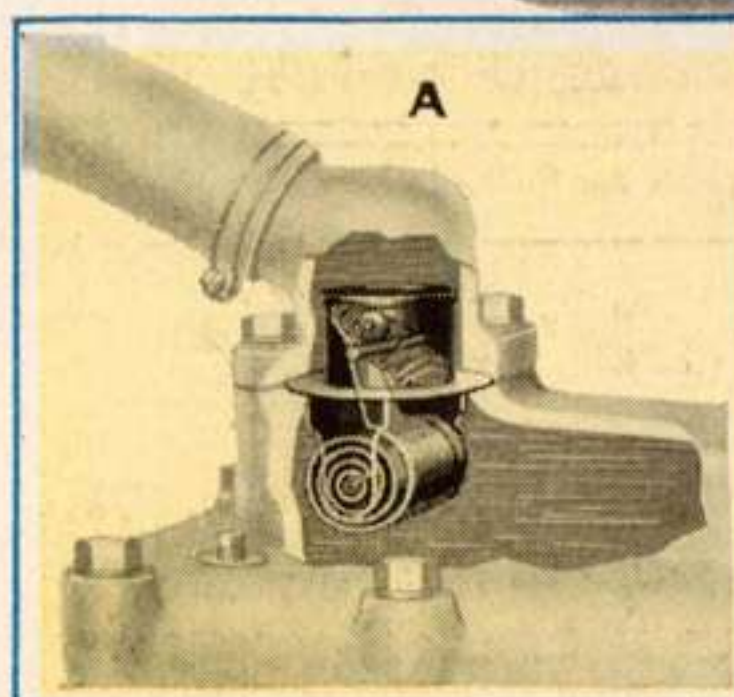
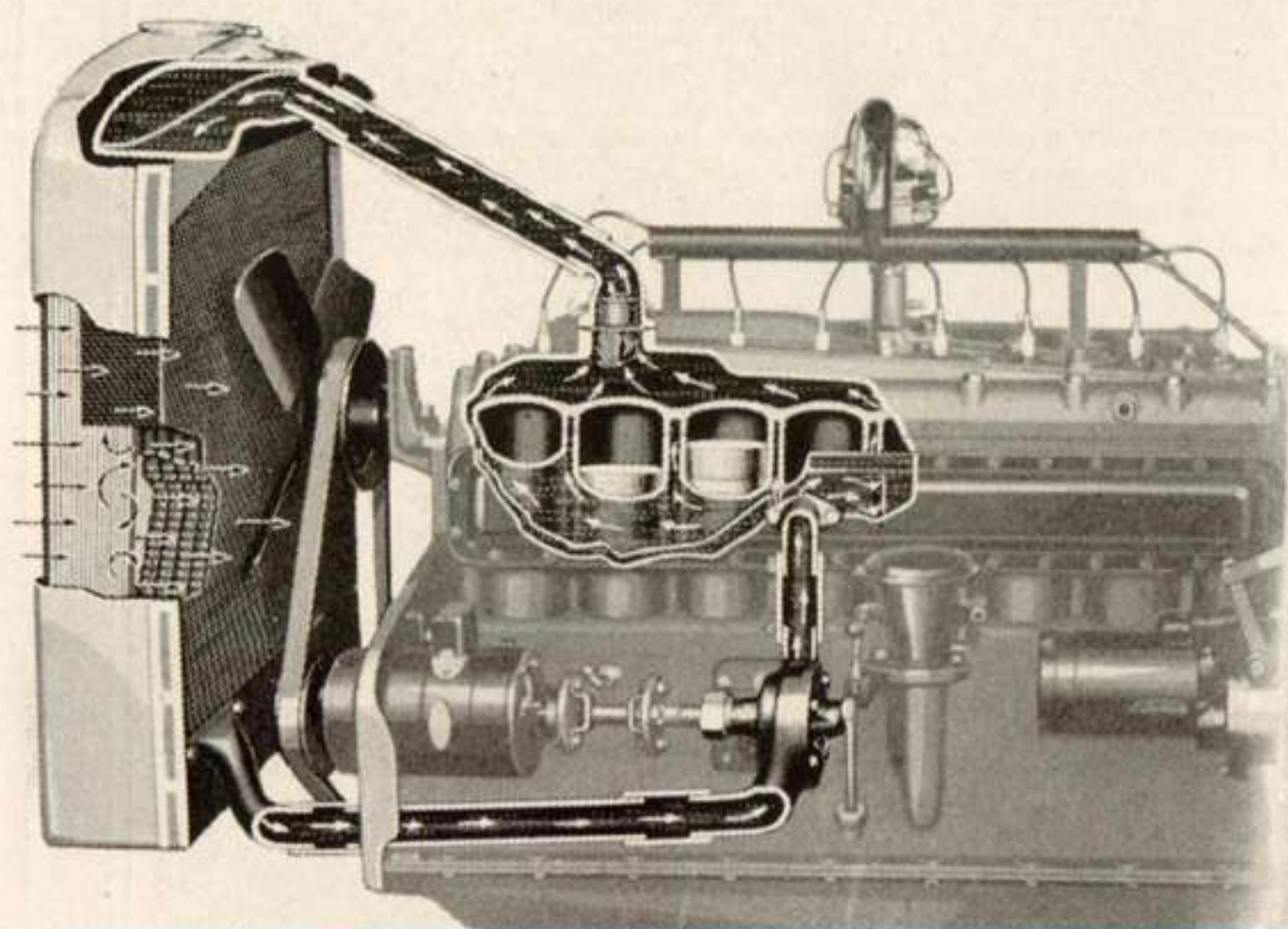
(RIGHT) Valve spring damper eliminates surge in spring action and gives longer life to valve springs as a result. Figure A shows action of valve spring with damper; figure B, without damper.



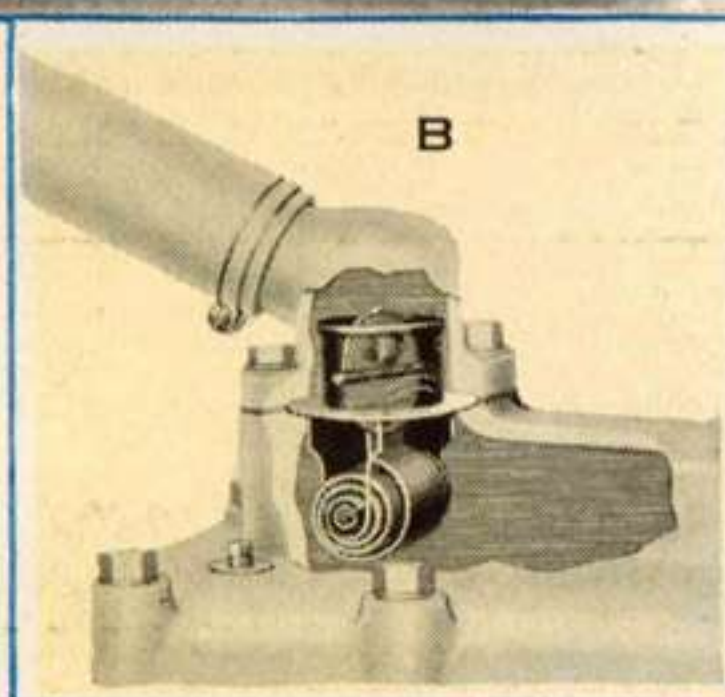
A



B

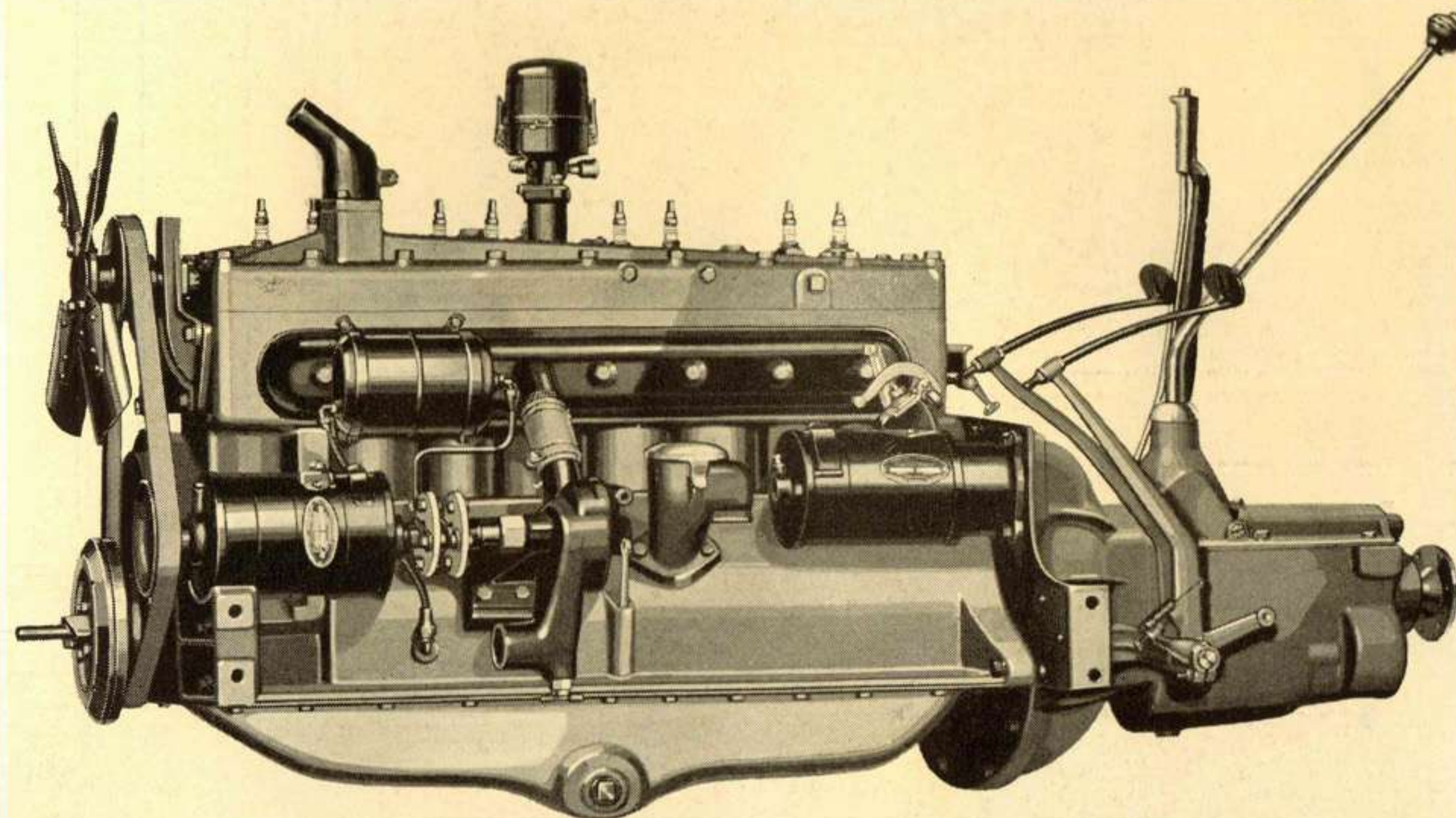


A



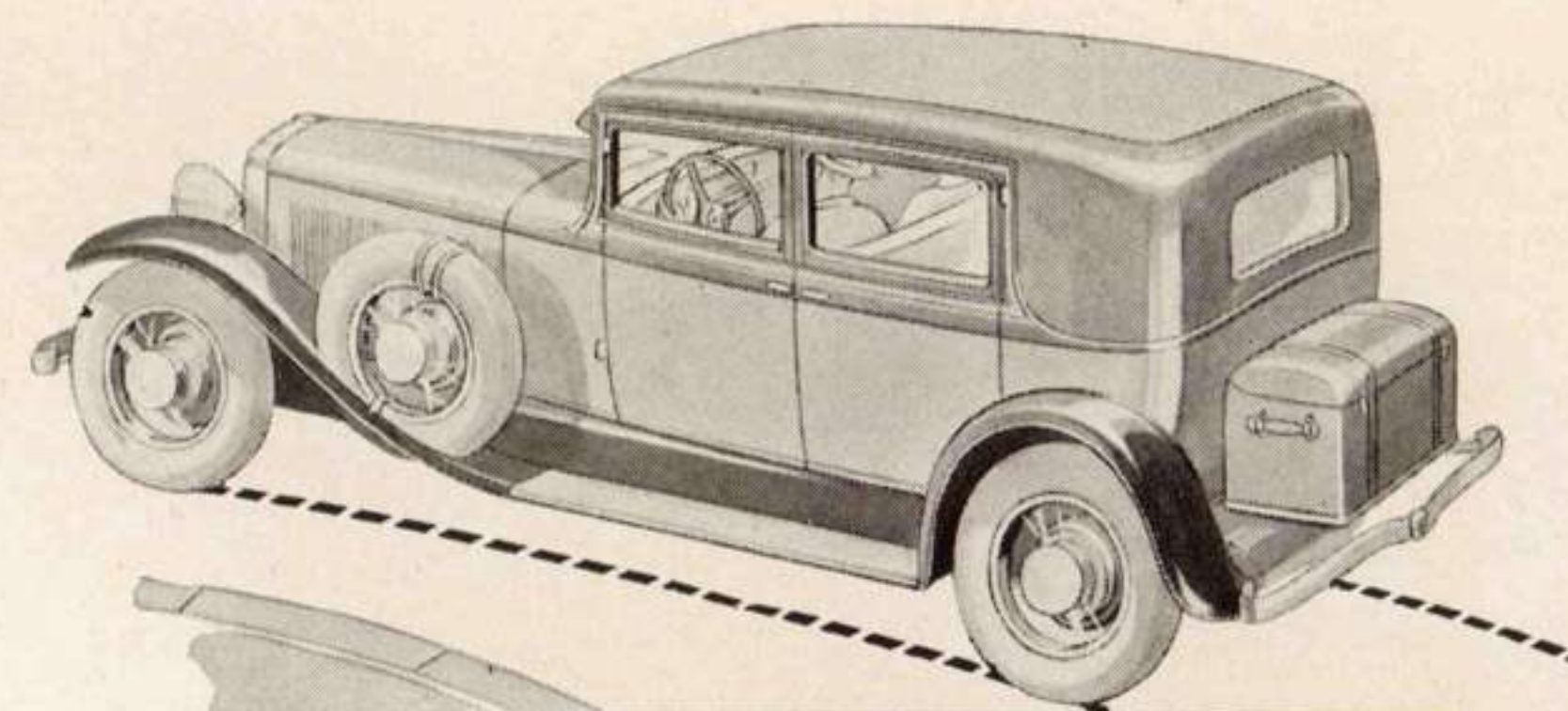
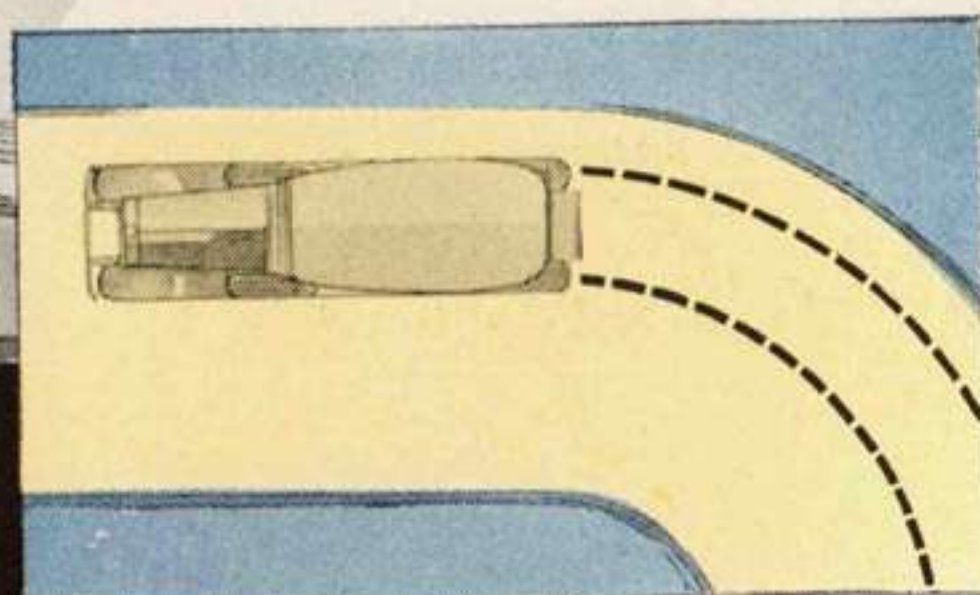
B

Improved cooling system, with high turbulence air deflectors providing increased air circulation. Thermostatic control maintains most efficient operating temperature. Figure A shows the thermostatic control closed against water circulation, until the motor attains a warm operating temperature. Then it opens as shown in Figure B.



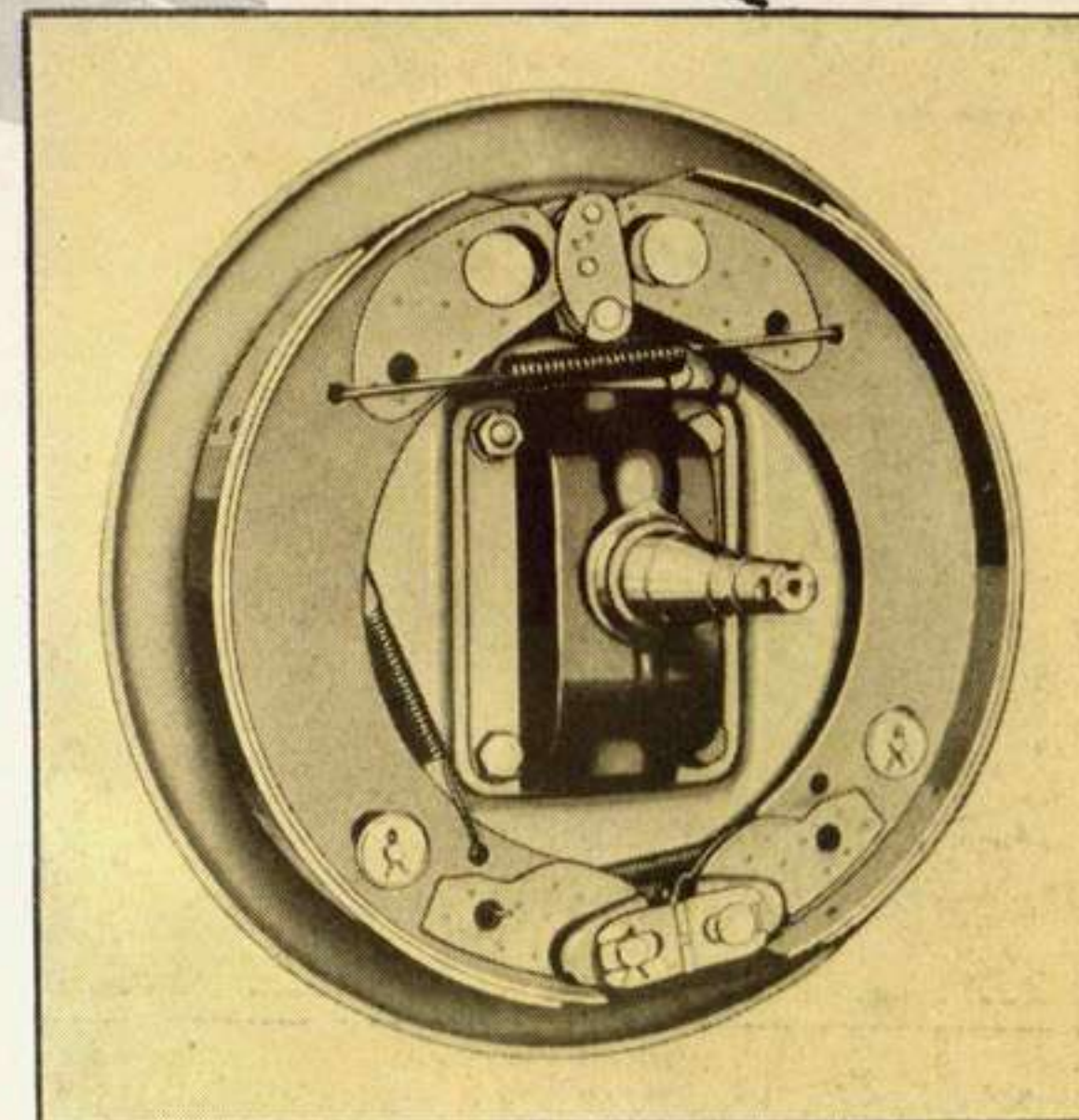
Greater horsepower and greater smoothness have been provided in the seasoned Straight Eight Commander motor. Power has been increased to 101 horsepower. A 1 1/4-inch duplex carburetor and manifold are used for brilliant speed and spirited acceleration. Added smoothness and quiet result from an improved Lanchester vibration damper with centrifugal governor, a 9-bearing crankshaft, a new carburetor silencer, developed by Studebaker — and Free Wheeling.





(LEFT) Greater steering ease and responsiveness are provided by a new self-righting steering gear. Timken roller bearings facilitate ease of control. Car holds its course true without constant tugging at the wheel.

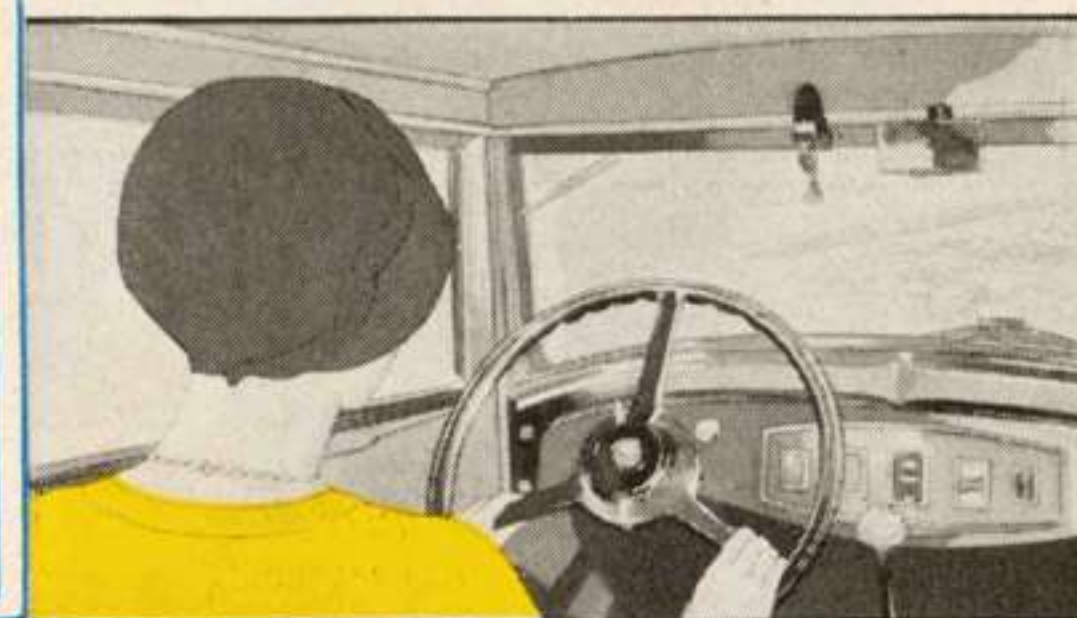
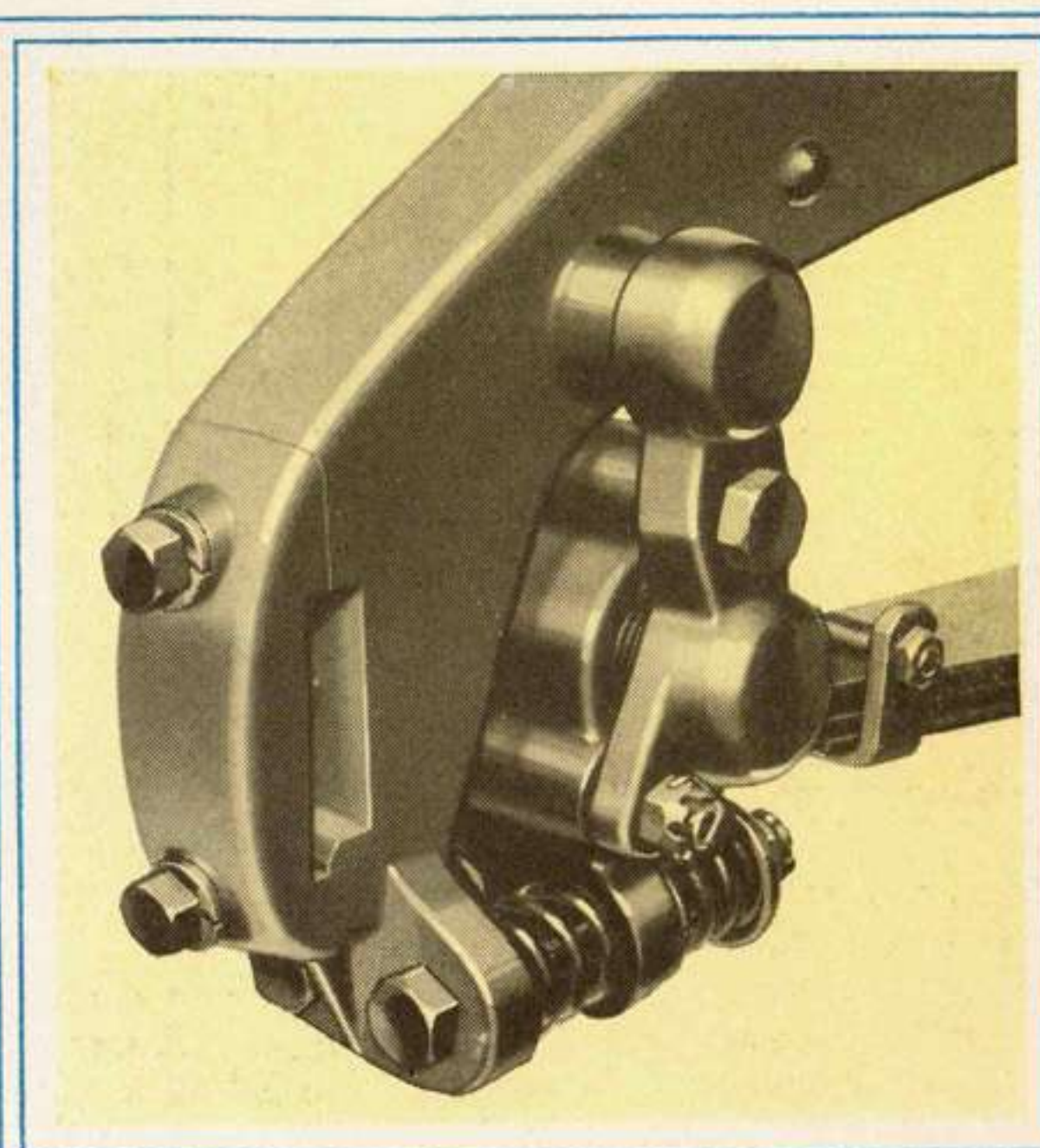
(RIGHT) Brakes are the new two-shoe, Duo-Servo type, internal expanding, with long-life molded lining. They are uniform in action, free from any tendency to squeal or chatter, very responsive to pedal pressure without being oversensitive.



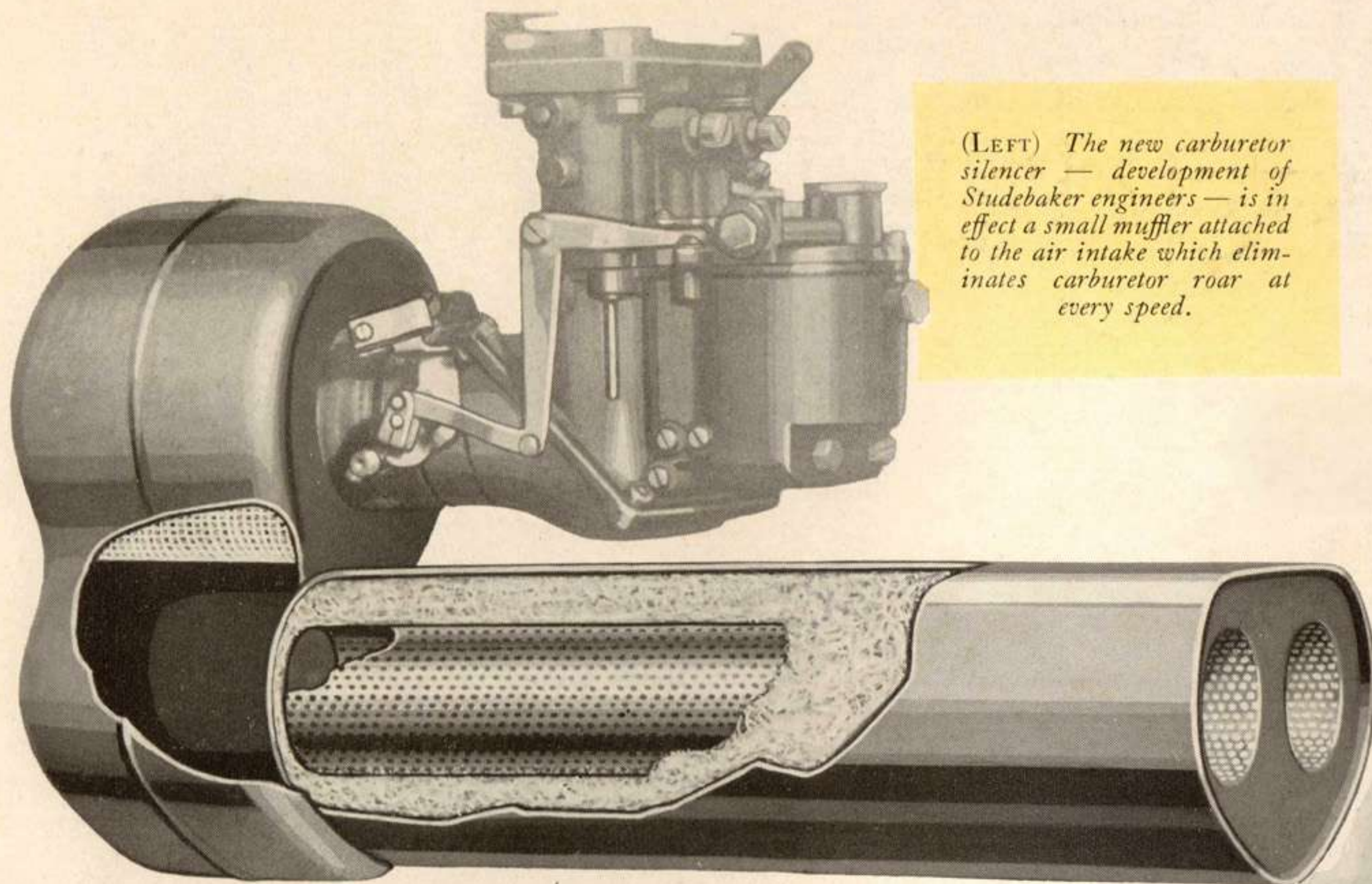
(BELOW) Shift gears easily and noiselessly from high to second—back and forth—at 40-50 miles per hour and never touch the clutch!



(RIGHT) On the left front spring horn is a device called a kick, or swing shackle. It completely banishes any tendency of shimmying and also prevents transmission of shocks from a rough road to the steering wheel.

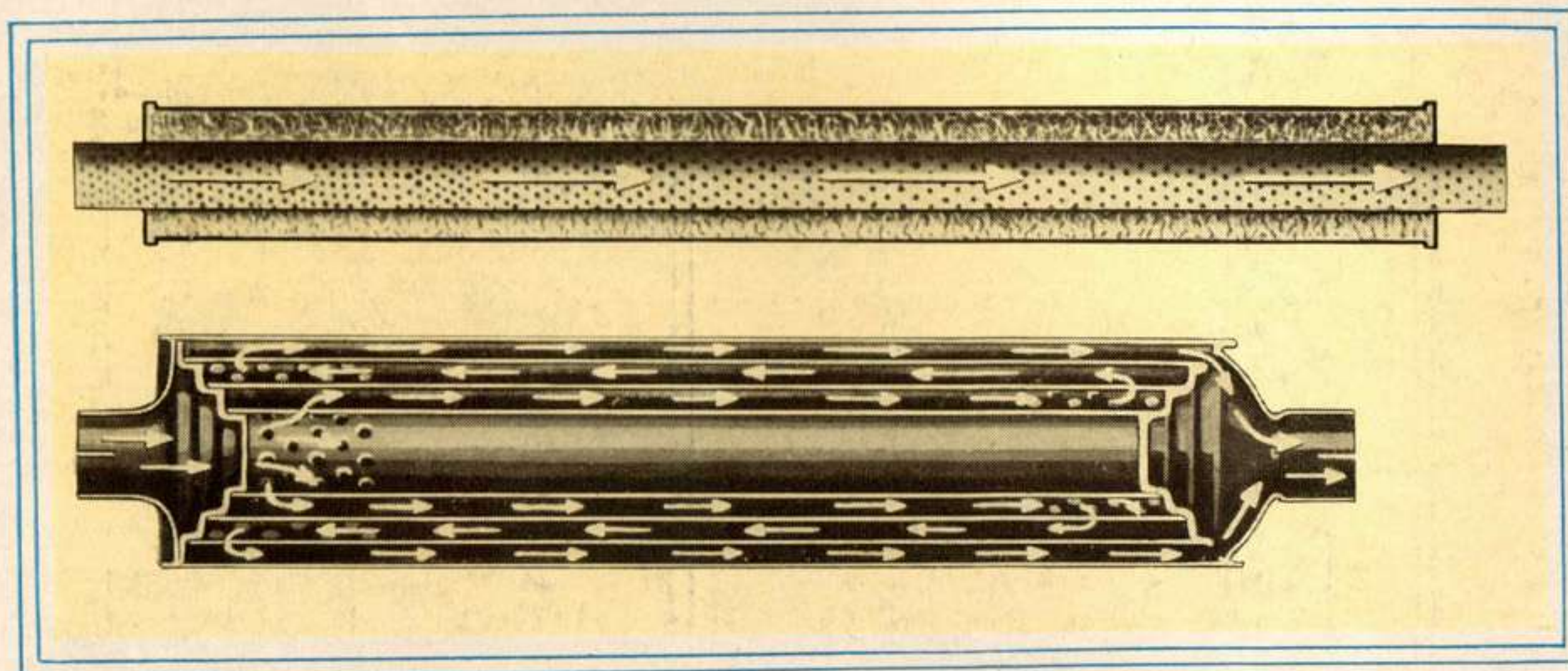
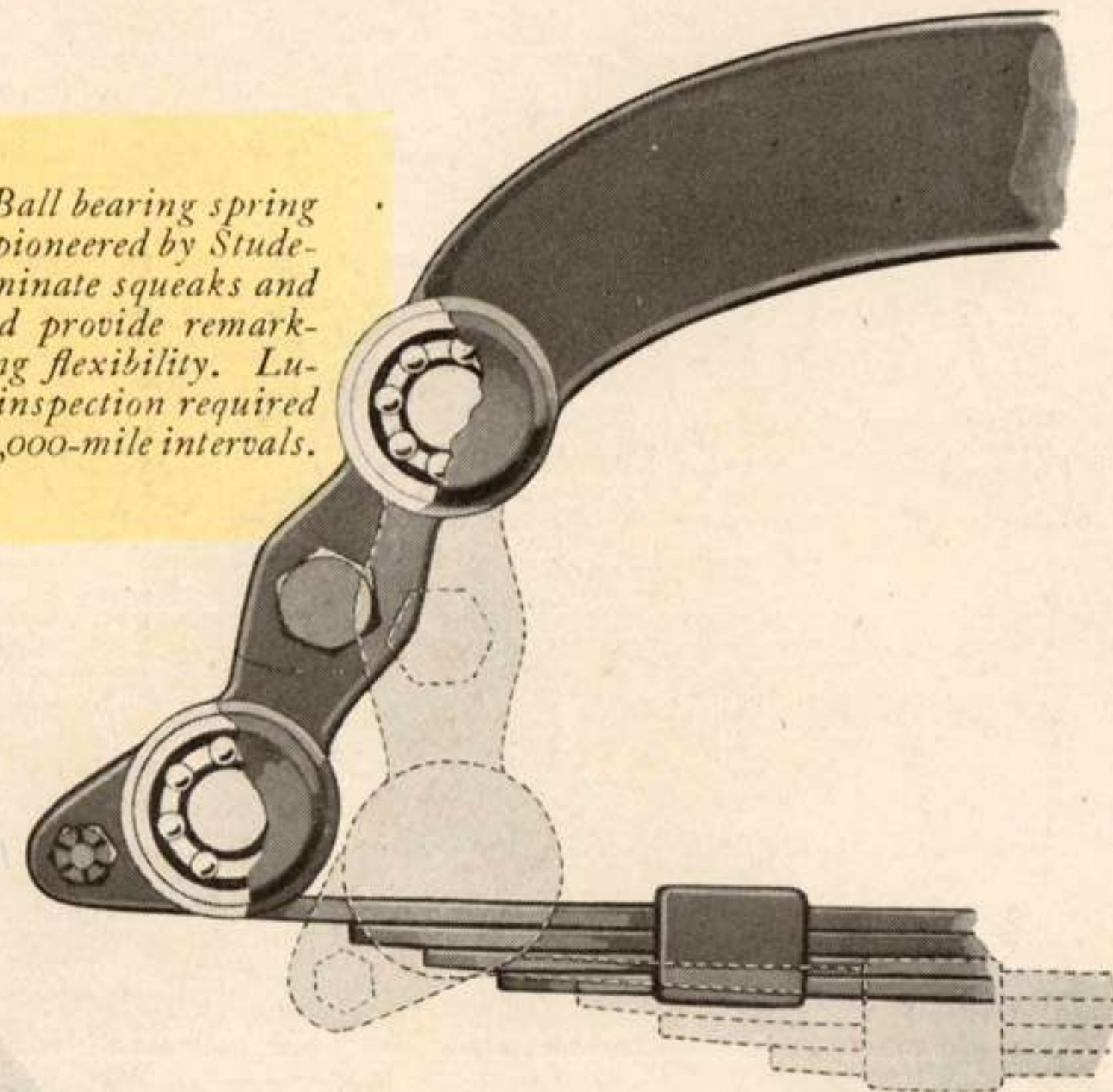






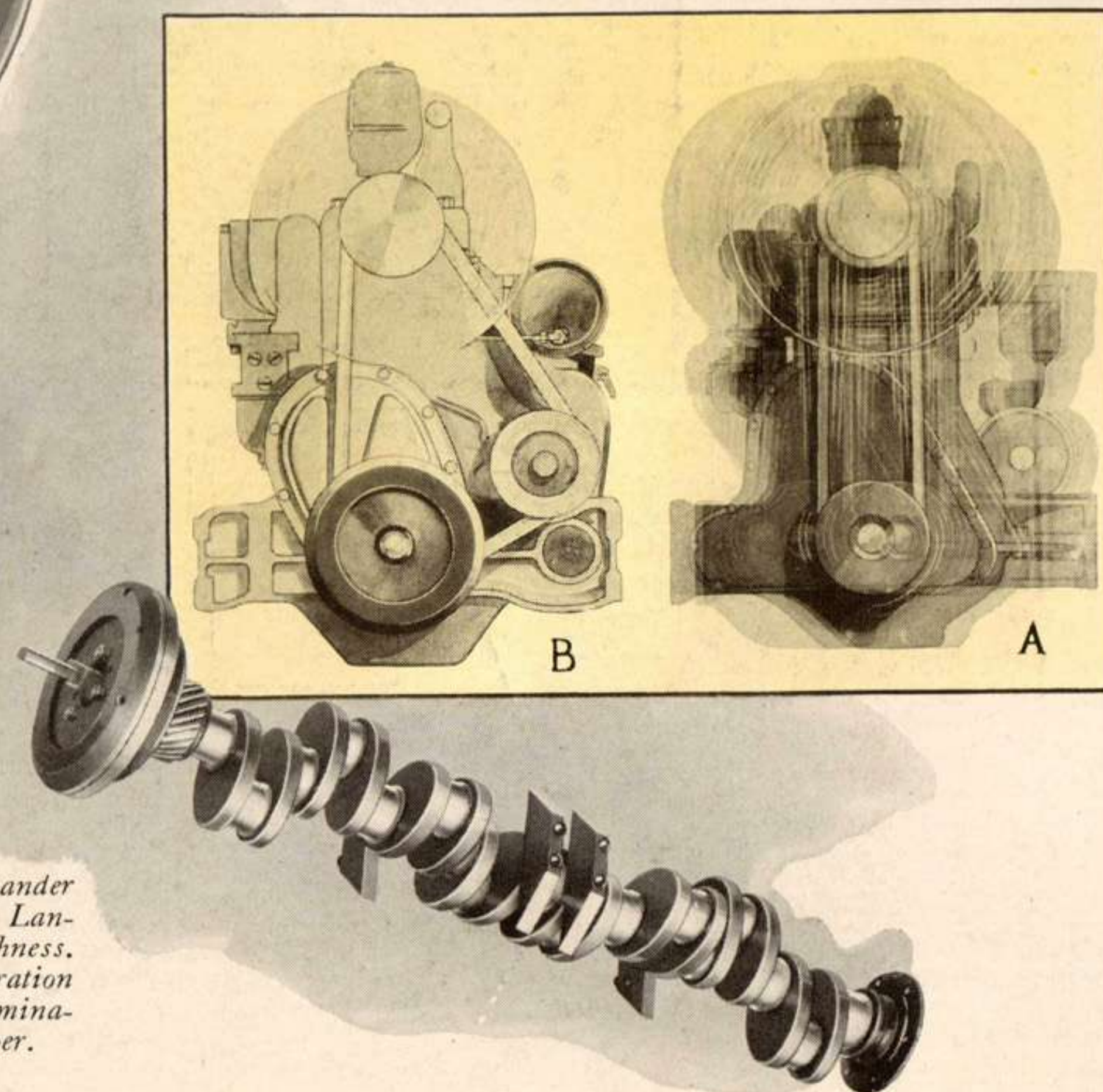
(LEFT) The new carburetor silencer — development of Studebaker engineers — is in effect a small muffler attached to the air intake which eliminates carburetor roar at every speed.

(RIGHT) Ball bearing spring shackles, pioneered by Studebaker, eliminate squeaks and rattles and provide remarkable spring flexibility. Lubrication inspection required only at 20,000-mile intervals.



(ABOVE) The full power muffler (upper) absorbs sound waves while offering little or no resistance to the passage of exhaust gases. Compare with the complicated passage in the conventional muffler (lower) which sets up engine back pressure and reduces effective horsepower.

(RIGHT) The 9-bearing crankshaft of the new Commander is statically and dynamically balanced. With the Lanchester vibration damper it provides maximum smoothness. Figure A shows tendency for a motor without vibration control to vibrate at high speed. B shows the elimination of the vibration through the Lanchester damper.







## SPECIFICATIONS



**WHEELBASE:** 124 inches.

**ENGINE:** Eight cylinders in line, cast en bloc; L-head type. Bore  $3\frac{1}{16}$  inches; stroke,  $4\frac{1}{4}$  inches; piston displacement 250 cubic inches. N. A. C. C. rating 30 horsepower. 101 brake horsepower. Engine mounted on rubber. Pistons are Bohnalite aluminum alloy with invar strut and split skirt fitted with four rings. Connecting rods, drop forged from selected steel. Shimless bearings babbitted, direct to steel. Heavy drop forged crankshaft, statically and dynamically balanced and counterweighted. Nine large main bearings, steel-backed and babbitt-faced. Improved Lanchester vibration damper with centrifugal governor. Crankshaft drilled for oil passages.

Camshaft quiet lift type, gear driven and mounted in six oversized bearings. Valves chrome nickel steel for intake, silchrome for exhaust. Valves operated by mushroom type push rods and cooled by ample water passages in cylinder. The valve spring damper developed by Studebaker eliminates surge in valve spring, thereby prolonging life and permitting higher engine speeds without possibility of valve spring breakage.

Full-power muffler. Steel-wool lined walls absorb sound waves yet offer little or no resistance to the passage of exhaust gases. Back pressure on engine thereby eliminated with consequent increase in effective horsepower.

**LUBRICATION:** Full pressure feed to main, connecting rod and camshaft bearings. Timing gears lubricated by overflow from forward bearings. Oil filter and crankcase ventilator. Connecting rods drilled with bleeder holes giving spurt of oil on cylinder walls at each revolution. Oil change necessary only every 2,500 miles after first 1,000 miles of operation.

**CARBURETION:**  $1\frac{1}{4}$  inch duplex carburetor with new silencer device developed by Studebaker. Manifold heating controlled from dash for seasonal variation in temperature. Spring loaded semi-automatic choke control. Air cleaner. Fuel pump supplies gasoline through filter.

**IGNITION:** Delco-Remy; current supplied by generator and 6-8 volt storage battery. Distributor is mounted in center of cylinder block and driven from oil pump drive shaft. Generator mounted left side of motor and driven by fan belt. Full automatic spark control with auxiliary manual control on steering wheel.

**STARTER:** Delco-Remy; controlled by button on dash.

**GASOLINE SYSTEM:** Fuel pump supplies gasoline to carburetor through filter. Hydrostatic gasoline gauge on dash. Gas tank 17-gallon capacity.

**COOLING SYSTEM:** Centrifugal water pump driven from generator. New design radiator with improved fin and tube type core and high turbulence air deflectors in grid. Improved, silent fan. Thermostatic control assures most efficient operating temperature.

**CLUTCH:** Single disc fitted with torsional damper to eliminate vibration and noise.

**TRANSMISSION:** Free wheel, selective type through helical gears. Three speeds forward, one reverse. Standard shift; mounted in unit with engine. Braking power of engine available in conventional high, second, first and reverse gears. In addition, high and second gears provide free wheeling. New exclusive free wheel feature gives new degree of silence, ease of shifting and safety of control. Main shaft mounted on ball bearings. Shaft and gears of special alloy steel, carbonized for greatly increased hardness and wearing qualities.

**REAR AXLE:** Semi-floating, with Chrome Molybdenum steel shafts. Spiral bevel gear final drive. Use of finer pitched teeth and improved spiral bevel gear cutting produce a rear axle of improved quiet and efficiency. Timken tapered roller bearings at wheel hubs and differential.

**DRIVE:** Hotchkiss type; tubular propeller shaft.

**SPRINGS:** Semi-elliptic, front and rear. Multiple leaves. Ball bearing spring shackles pioneered by Studebaker eliminate squeaks, rattles and adjustments and provide remarkable spring flexibility. Kick shackle on left front spring.

**BRAKES:** Duo-Servo, two-shoe, mechanical, four-wheel brakes, internal expanding type, with long-life molded lining. Brake drums 13 inches in diameter,  $1\frac{3}{4}$  inches wide. Hand-brake acts on all four wheels.

**LOCKS:** Coincidental steering and ignition lock, assuring lowest theft insurance rates. Same key operates all locks on car.

**STEERING GEAR:** New self-righting cam and lever type, 17-1 reduction. New kick shackle on left front spring horn prevents shimmy. Timken roller bearings on steering pivots. Thin-grip, steel-core safety steering wheel.

**FRAME:** Rigid pressed steel, double-drop construction. Frame braced by six sturdy cross members. Four-point motor suspension, rear cushioned in rubber.

**WHEELS:** Wood wheels, 10-spoke, heavy duty artillery type. Six wire wheels standard on Regal models.

**TIRES:** Full balloon tire, six-ply; 19 x 6 inches. Non-skid all around.

**BODY:** Full-vision armored body has narrow windshield pillars for safety and visibility. Safety glass in windshields of all models; throughout on Regal models. No-glare windshield.

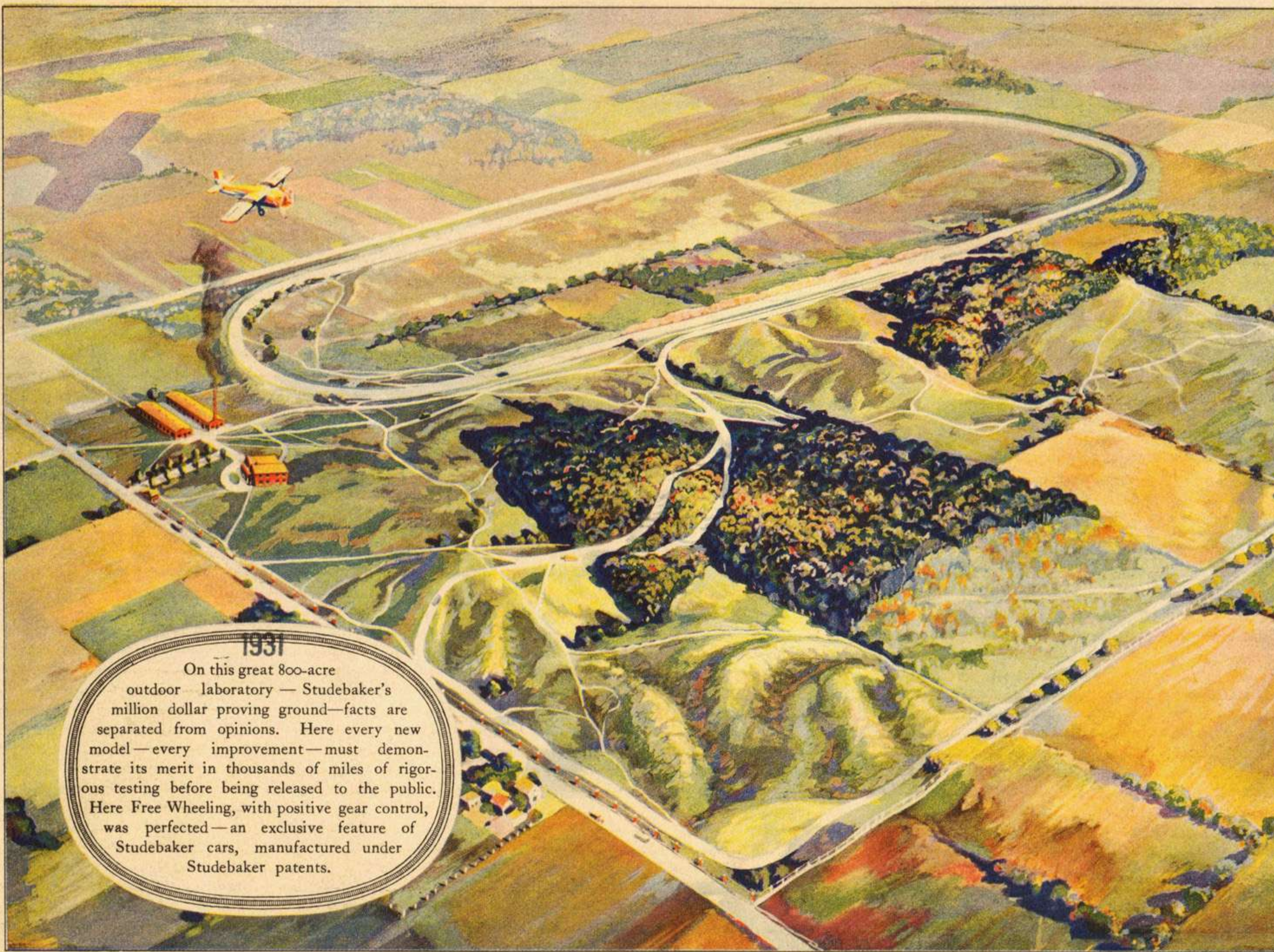
**REFINEMENTS:** Mohair or Bedford cord upholstery according to model. Form fitting seats and heavily upholstered arm rests in rear seats of closed models. Silken curtains, cowl pockets, harmoniously finished instrument board. Robe rail, assist cords, cowl ventilator. Smoking case and ash receiver in Sedan, Brougham and Victoria models. Treadle type accelerator. Adjustable front seat and steering column. All closed models wired for quick, economical radio installation.

**LIGHTS:** Twin-beam chrome-plated Ovaloid headlights, and fender lights. Instrument board indirectly lighted, with flood light over coincidental lock. Opal iridescent dome light; rear traffic signal light.

**EQUIPMENT:** Two automatic windshield wipers and rear vision mirror. Speedometer, gasoline gauge, engine thermometer, oil pressure gauge and ammeter grouped in individual frames under glass and indirectly illuminated. Hydraulic shock absorbers, front and rear. Le Modern bumpers.

Studebaker reserves the right to change any of the specifications listed without obligation to subsequent purchasers or to add new designs or improvements without making similar alterations in automobiles manufactured. Studebaker also reserves the option of changing colors to other combinations than those shown in this catalog.





1931

On this great 800-acre outdoor laboratory — Studebaker's million dollar proving ground—facts are separated from opinions. Here every new model—every improvement—must demonstrate its merit in thousands of miles of rigorous testing before being released to the public. Here Free Wheeling, with positive gear control, was perfected—an exclusive feature of Studebaker cars, manufactured under Studebaker patents.