

*Nash*

**SPECIFICATIONS FOR 1946**

**A Preview of the important New  
Features and Improvements of  
Nash models that enhance Quality,  
Longevity, and Performance.**



# NASH FOR 1946

## 1946 NASH MODELS (Deluxe)

<b>"600" SERIES</b>	<b>BODY TYPE</b>	<b>AMBASSADOR</b>
MODEL		MODEL
4643	Brougham	4663
4646	2-Door Sedan	4666
4648	4-Door Sedan	4668

Prepared for the Nash organization and Dealers who will merchandise the improved 1946 Series of NASH "600" and "AMBASSADOR" cars.

**NASH MOTORS**  
Division of Nash-Kelvinator Corporation  
Detroit, Michigan

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# NASH FOR 1946

There will be two new NASH cars for 1946: Nash "600," the economy car, and AMBASSADOR, the super-powered model. Despite rumors which have been circulating throughout the industry about 1946 models, these new Nash cars are not "warmed over" or "face lifted" versions of the 1942 models. Over one hundred improvements have been made—more than ordinarily incorporated in the usual yearly model change—and these improvements have been added to a car which was just being introduced as one of the most advanced in design when the Jap attack came at Pearl Harbor and war brought automobile production to an abrupt halt. The appearance of the cars also have been enhanced for 1946. To say that a hundred improvements have been made is almost like "gilding the lily," yet that is true. These apply to appearance, construction, engine and chassis and will be most appreciated by those who know the past performance of Nash cars best.

## *More Power*

Both the "600" and "Ambassador" engines have been stepped up in power, by detail refinements in design. The "600" engine now develops 80 and the "Ambassador" 112 horsepower, but these figures don't tell the whole story.

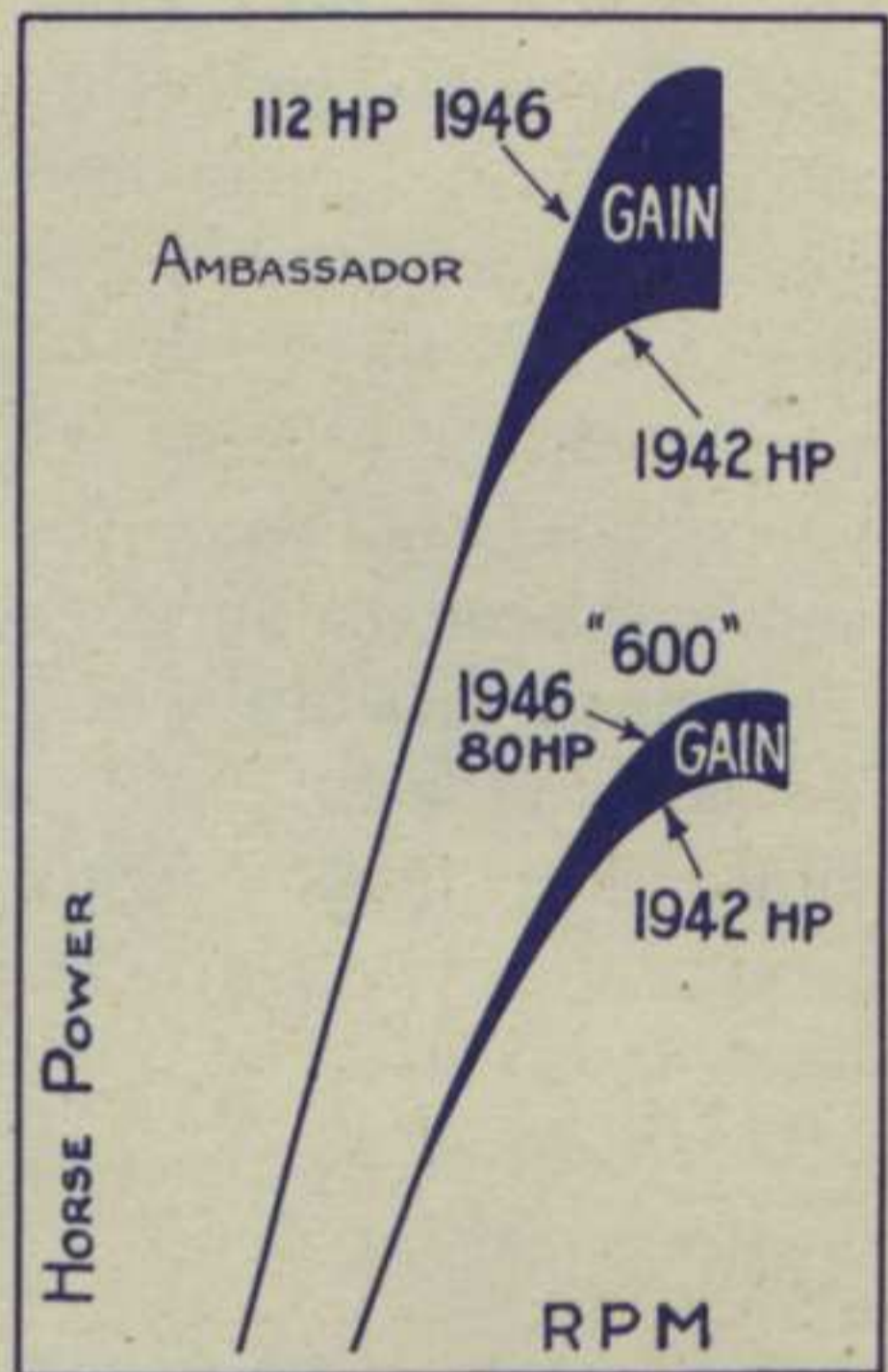




## More Power

They don't tell you that the "600" is still the same economical full size car that it always has been. A car in which you can take a 500 or 600 mile week-end trip on a full tank of gasoline.

Fig. 1—Curves show gain in horsepower on both Ambassador and "600" engines. Ambassador now develops 112 and Nash "600" 80 horsepower.



The horsepower does not tell you that the pick-up and life of these engines has been greatly improved by changes in valves and valve-springs, improved intake manifolds, new cylinder heads with changes in compression ratio, better piston pin and cylinder lubrication, connecting rod bushings, improved water cooling of both cylinders and valve seats.





## Appearance

Big and rugged is the first impression you probably get the first time you view the 1946 models. Shortening and making a heavier chrome belt line trim on the sides of the hood gives the whole car a more massiveness appearance not unlike that on one of the highest priced cars in the industry.

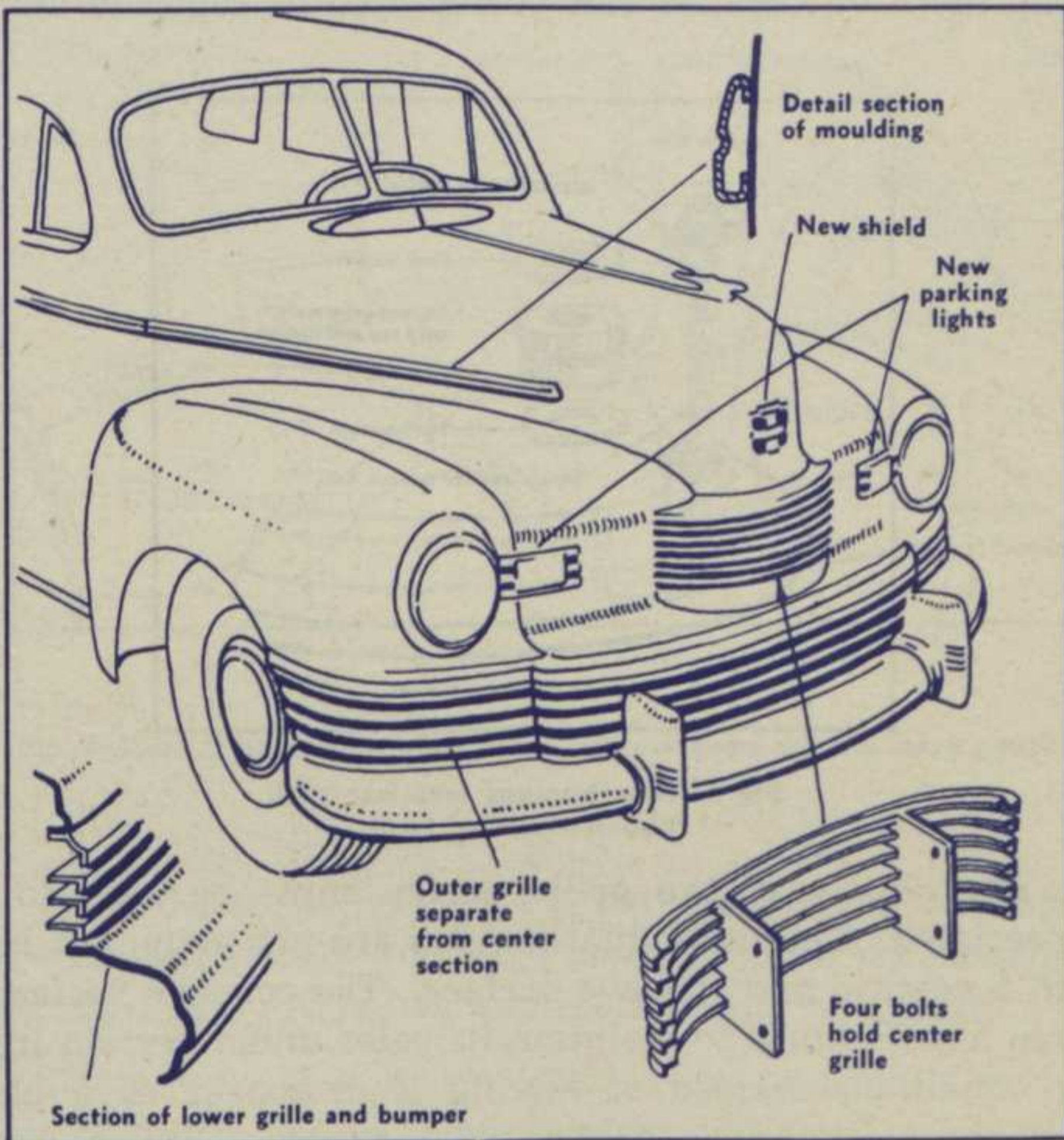


Fig. 2—Front end details showing die cast center grille.

A new molding along the top of the hood adds to this impression as well as the lower grille bars which curve around the front corners of the fenders and are well protected by "wrap around" bumpers—new in 1942 with Nash—now a *new* feature of some other 1946 cars.





## Appearance

Center grille bars are now made from a chrome plated die casting, held in place by four bolts for easy replacement in case of damage.

The four lower grille bars are made from rustless steel and built up in three sections—the outer, or fender ones, being more vulnerable, can be replaced as separate assemblies.

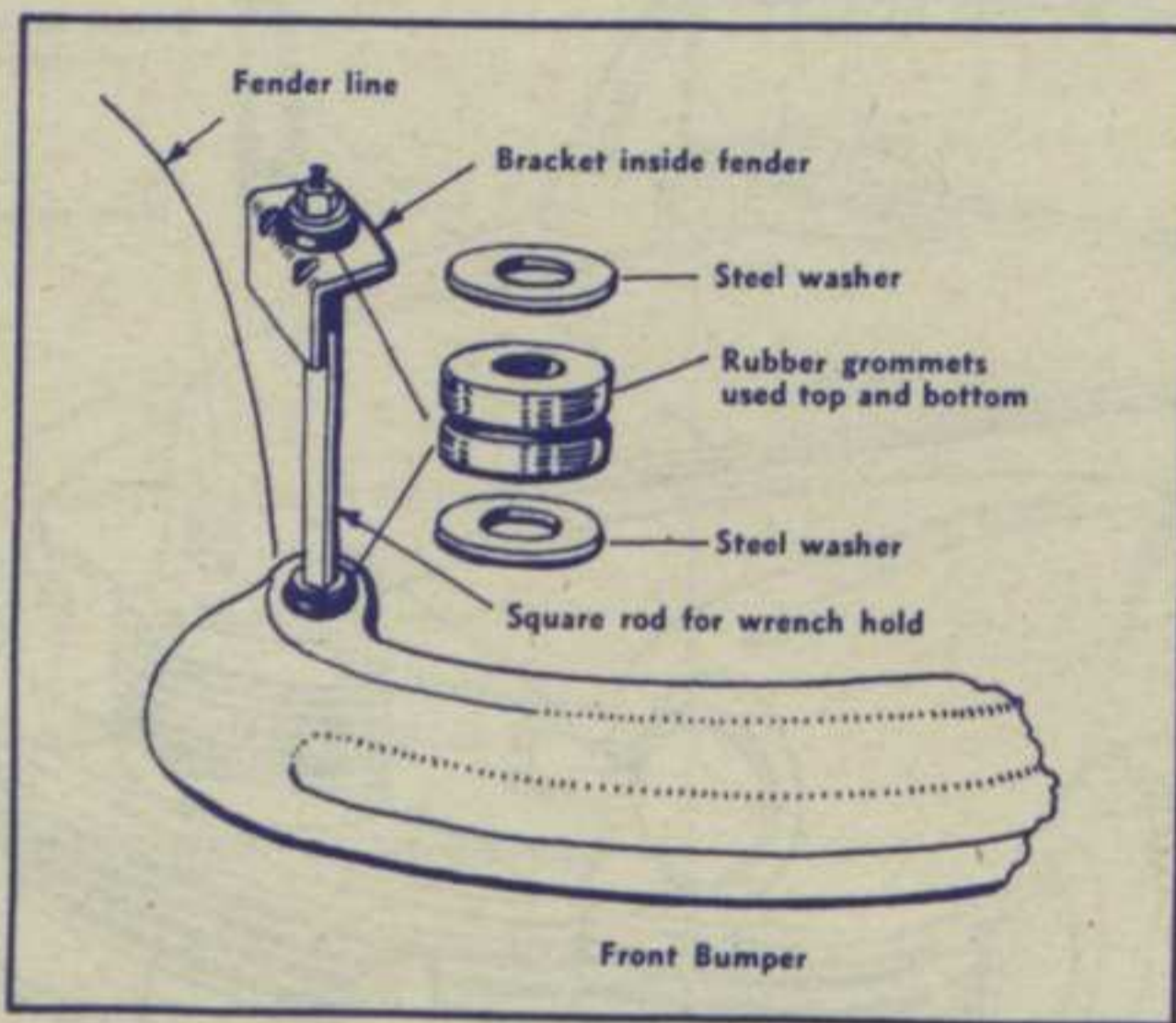


Fig. 3—New bumper levelizer with rubber insulated ends.

The beauty of the grille design must be seen to be appreciated. The individual louvres are not plain, but have both a vertical and concave surface. The concave surface is given a satin finish to maintain its color under certain lighting conditions instead of having it disappear as a black shadow.

“Wrap around” bumpers will be the style in 1946. Nash has them—has had them for four years—and as a result has perfected their mounting.

Front and rear bumpers slip under the lower grille bar so there is no unsightly gap or splash opening. From long experience with these bumpers Nash has devised an adjust-





## Big Body

able leveling link at each end—mounted in rubber—which allows bumper flexibility, yet keeps fender and bumper in noiseless alignment at all times.

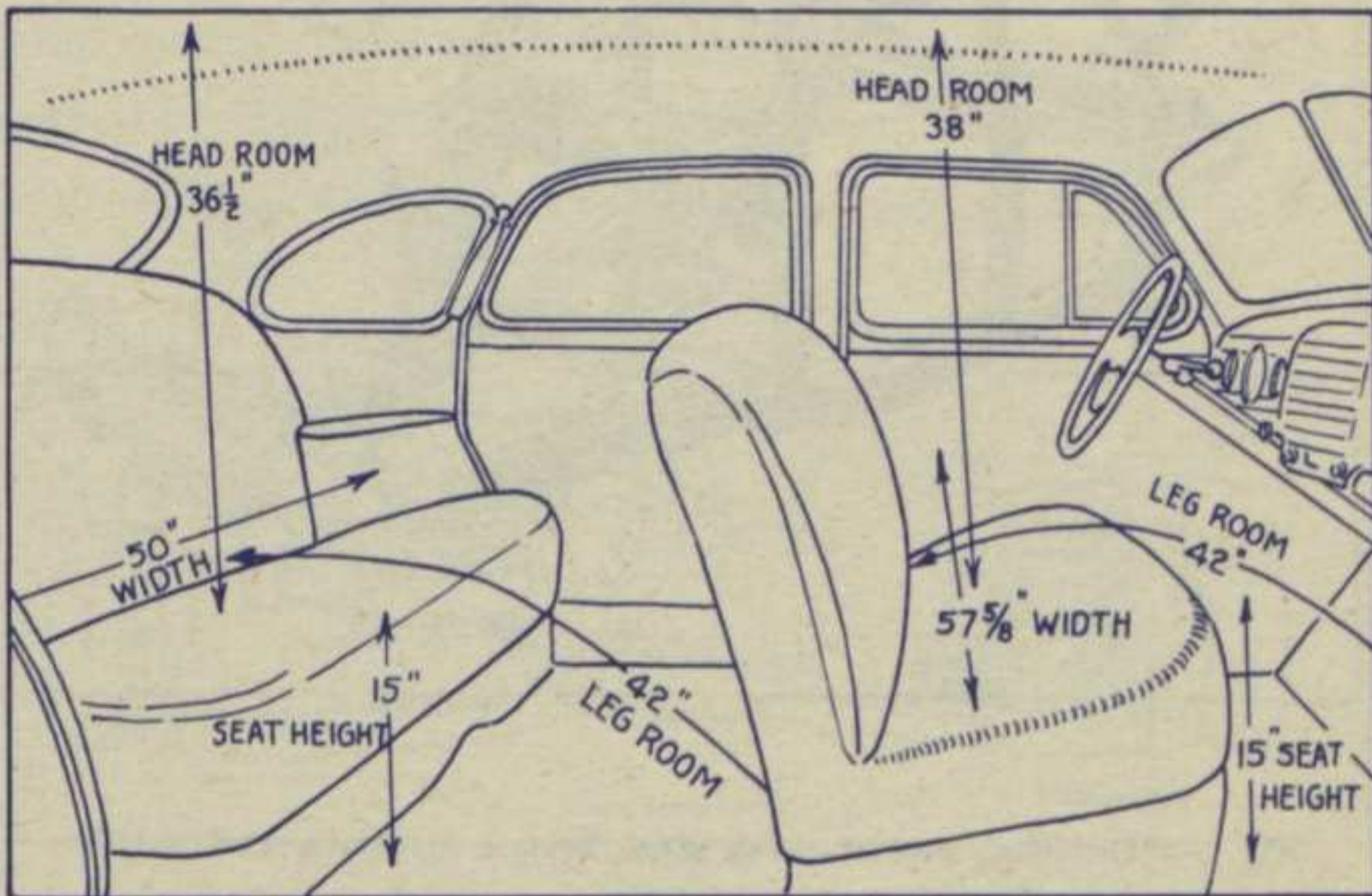


Fig. 4—Enough leg-room, head-room, elbow-room for six large people.

Nash Sedan bodies are big car size. Their dimensions show they are larger and have more room for six passengers than most cars in the low and medium priced classes.

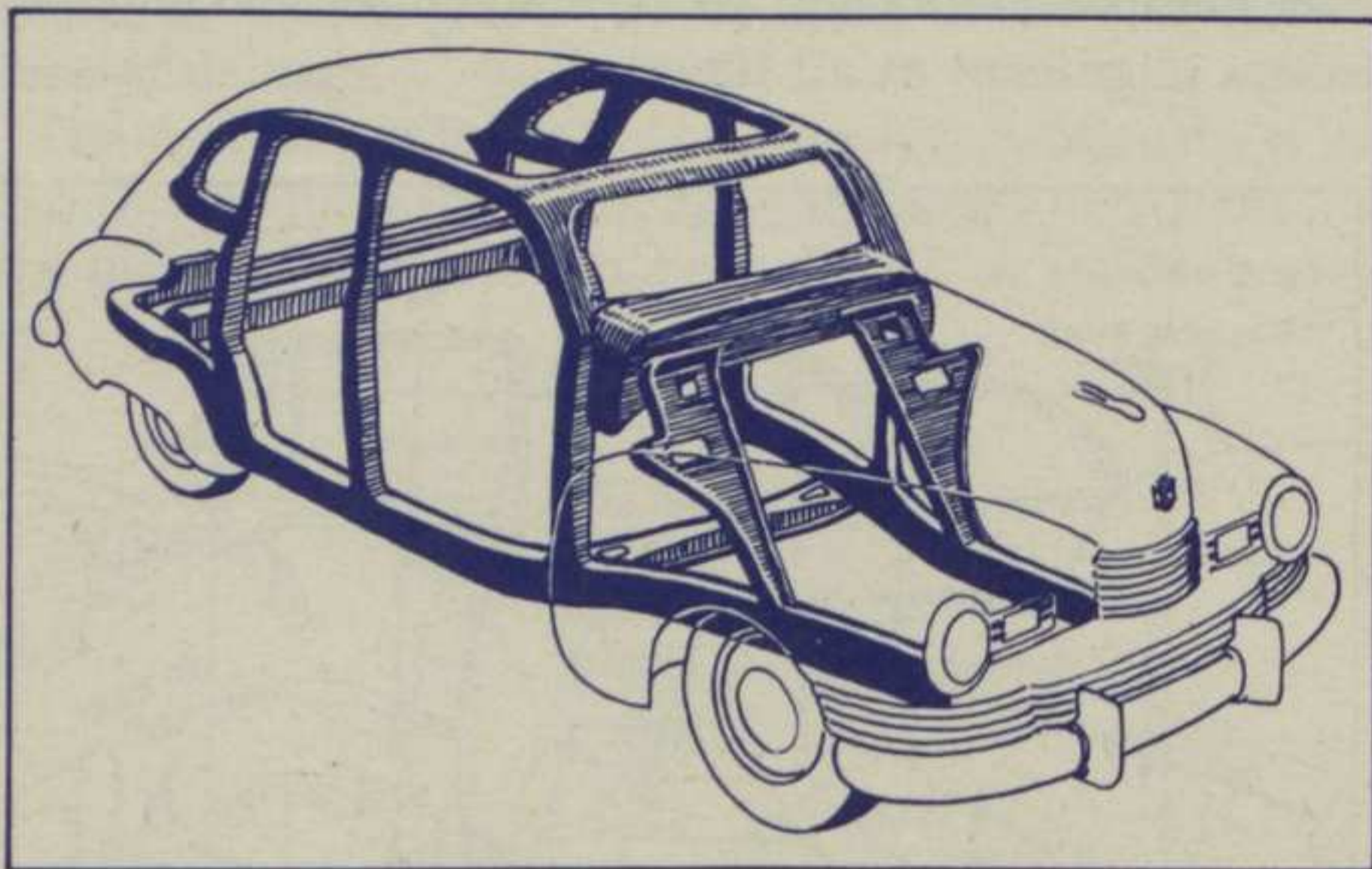
There have been many detailed improvements made in these bodies to assure more comfort and satisfaction to the user, such as stiffer floors, improved door locks and window regulator handles, smoother acting door hinge springs, and heavier rear deck lid hinges.

Inside, the instrument panel is gorgeous to view with its "engine tooled" brilliance. It's more durable, too.





## *Big Body*



**Fig. 5—“Unitized body” gives steel bridge strength and safety.**

The interior trim has been improved in quality. Many new features are included not the least of which is an opening in the rear floor tunnel through which the propeller shaft center bearing can be lubricated.

Body quietness and safety are assured by the “Unitized” all steel body which is continued on all Nash cars for 1946.

On the Nash “600” this body permits a saving of almost 500 pounds of car weight because no chassis frame has to be used. The front and rear suspensions are attached directly to this one piece bridge-like structure.

The same body is applied to Nash Ambassador, and mounted on a steel frame which provides for the larger engine and longer wheelbase, but the body has the same safety advantages as the “600.” It is noiselessly attached through rubber mounts to this chassis frame.

“Sand-Mortex” noise insulation is continued in all 1946 bodies—a feature on Nash cars for years.





## Comfort Ride

Independent front wheel suspension of the same parallel arm construction as used on the Ambassador is now one of the features on the Nash "600." This not only provides a simpler design than was formerly used, but a much more rugged one. Also the "600" retains the "all coil spring" suspension which was its exclusive feature in the low priced field in the past.

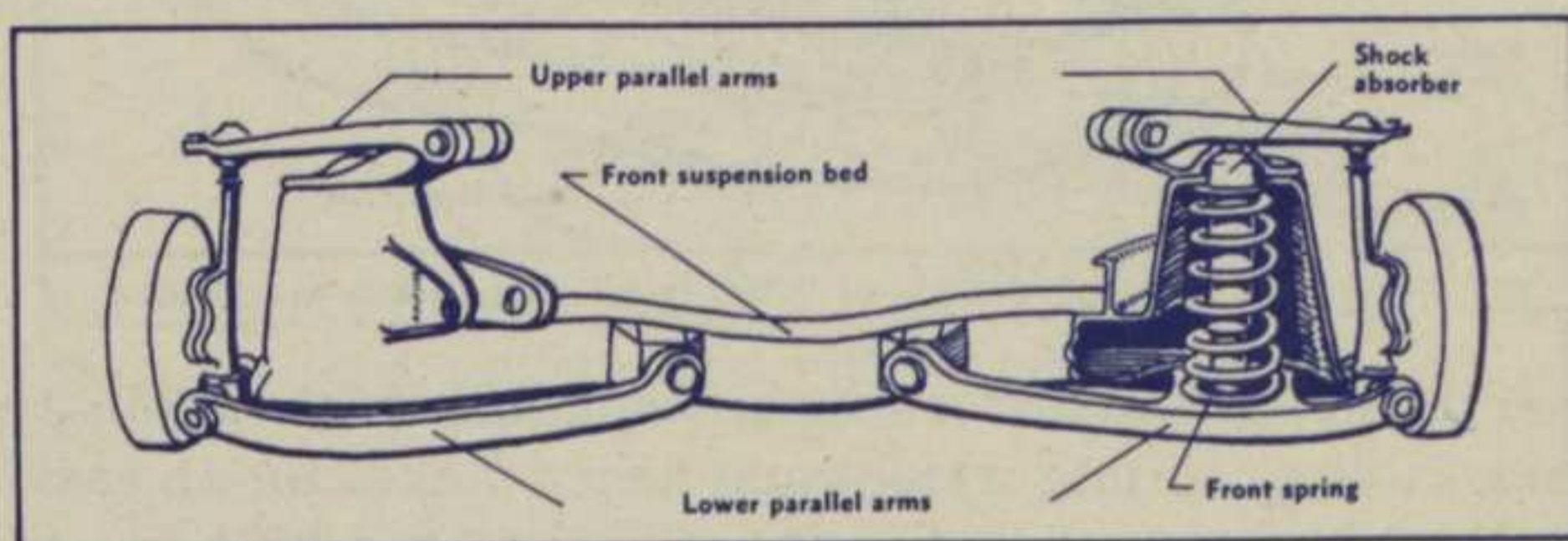


Fig. 6—Diagrammatic sketch new "600" front suspension unit.

This new front suspension, however, is unique in that it is built up as a complete sub-assembly and then attached to the front end of the "Unitized" body. The sturdy box-like member which forms the foundation of this sub-assembly carries the parallel wheel supporting arms, front coil springs, king pins, steering linkage and front wheels. It is attached to the front end of the body by four rubber encased bolts that insulate the body from road noises.

There are some unique advantages to this suspension; it can be removed and replaced in case of damage as easily as a demountable wheel; it acts as a front cross-member and adds strength to the front end of the "Unitized" body; another unconventional feature is the use of the king pin as a tie be-





## Comfort Ride

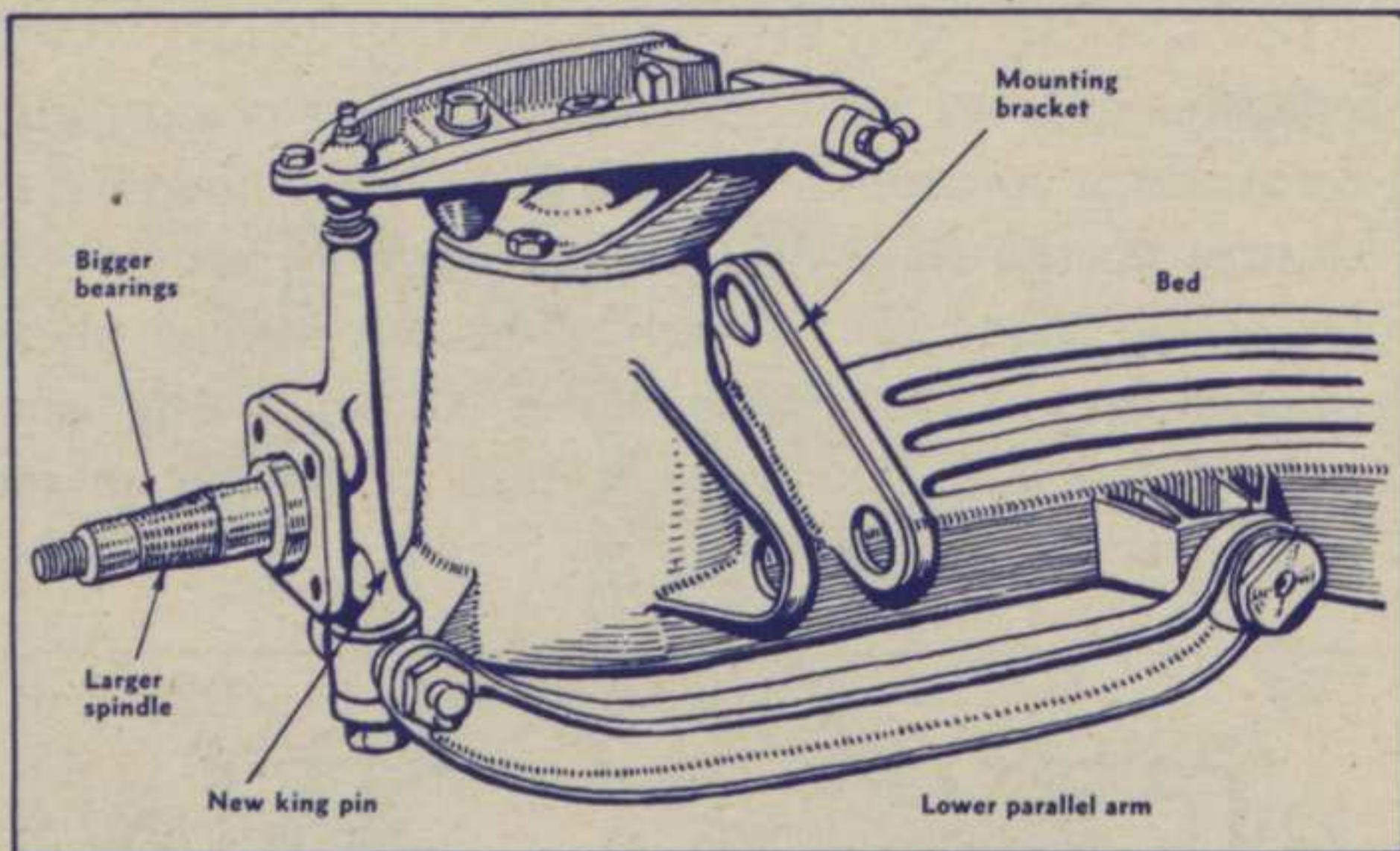


Fig. 7—Sketch showing details of "600" front suspension at one end.

tween the upper and lower supporting arms which eliminates considerable unsprung weight and hence makes for an easier ride; the top and bottom bearing points of the king pin are much farther apart than on conventional axles, thus reducing the load on these bearings and preserving wheel alignment longer; reducing the wear and stabilizing steering; the location of the coil springs in this suspension make it possible to use softer front wheel springs and make the front and rear spring rates practically the same for a "level ride"; and the direct acting double action hydraulic shock absorbers can now be placed inside the front springs for better protection and effectiveness.

Another advantage of this new front suspension is the elimination of tie bars over the engine. Now, the cylinder head can be removed without interference.

The simple method of rubber encasing the four front suspension attaching bolts will be appreciated by servicemen who have to remove or replace this sub-assembly. Users will appreciate it because there is no metallic contact possible to cause noise.





## Comfort Ride

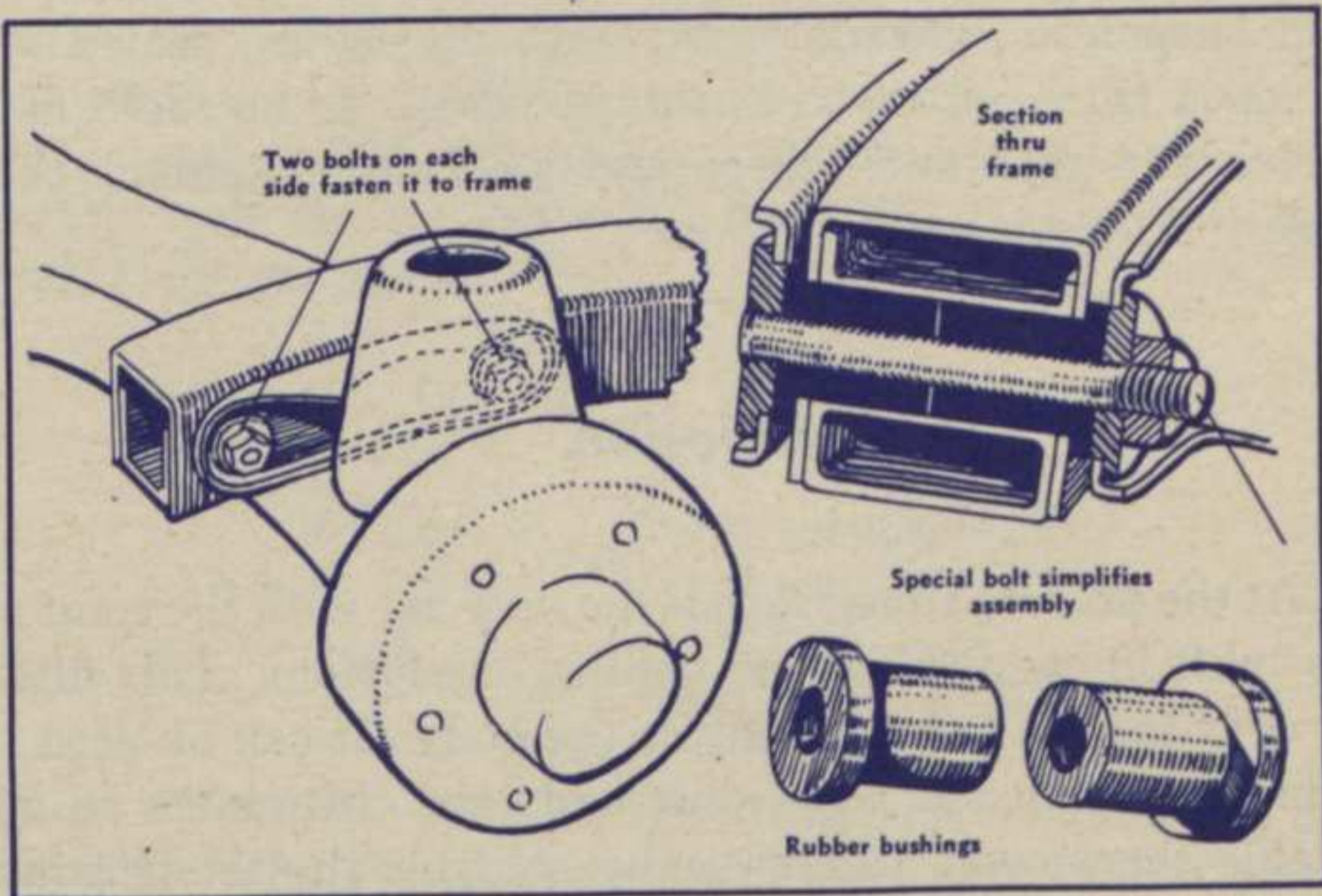


Fig. 8—Four rubber encased bolts attach "600" front suspension to body sills.

The Ambassador has used the parallel arm type of independent front spring suspension for years. This follows the best engineering practice in its design. It is mounted on the sturdy front cross-member of the chassis frame.

Improvement in the ride for 1946 has been obtained by lowering the rear spring rate from 120 to 105 lbs. per inch to obtain the "level ride" so noticeable in the 1946 models.

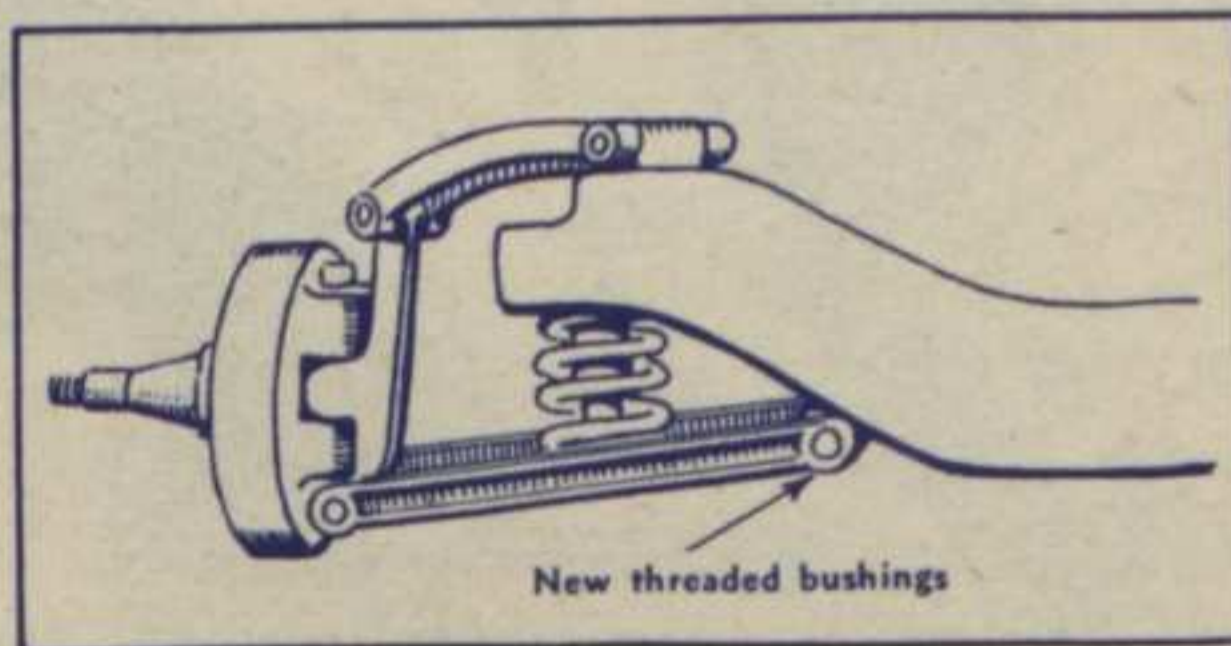


Fig. 9—Diagrammatic sketch, Ambassador front suspension showing type and improvements.





Other improvements are reinforcement of the front ends of the frame side rails and replacement of the rubber in the front suspension parallel arms with lubricated, sealed and hardened threaded metal bushings. These do not deform in service and maintain wheel and steering alignment over longer periods of use.

## *Conditioned Air*

At the present time, Nash is the only car with the comfort of a built-in conditioned air ventilating system. This filters and dries the air before it enters the body. It can be used in summer to keep out bugs, dust and rain. In winter an adjustable thermostat automatically controls the temperature of the air to suit the occupants. Up to 600 cubic feet of tempered FRESH AIR per minute are supplied the passengers.

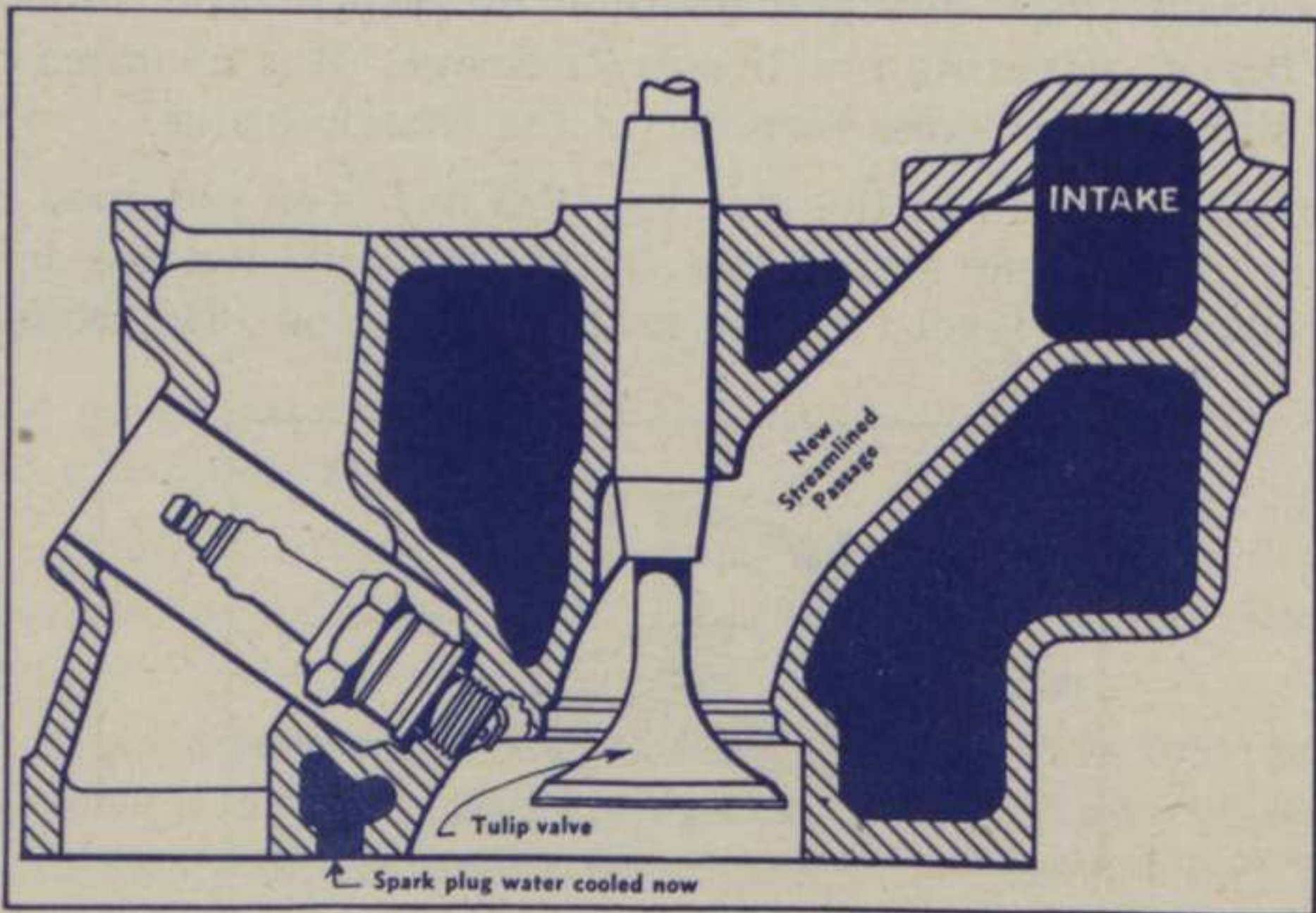


Fig. 10—Sectional sketch showing improvements in Ambassador cylinder and manifold. →





This prevents sleepiness and headaches, keeps out draughts because the pressure inside the body is greater than that outside and minimizes frosting of windows and windshield because moisture is carried out by the circulating fresh air. Don't compare this with any recirculating type heater which merely heats the air inside the body but does not revitalize it nor keep drafts out.

## *Unseen Improvements Ambassador Engine*

New cylinder head design increases compression ratio from 6.4 to 6.8. This has been made possible by better cooling of the spark plugs, exhaust valves and mixture temperature control. More power is also obtained by improved valve port and intake manifold design, better valve rocker arm ratio and improved combustion chamber shape.

The intake manifold has been raised so as to permit water to circulate all around the spark plugs. It is only heated by the exhaust at the center now giving cooler mixtures and more power.

The passages into the valves are now streamlined so as not to cause eddy currents which prevent free flow of mixture into the cylinders.

Valve noise has been greatly reduced by the adoption of single springs with safety clips, which prevent high speed spring vibration disturbances and their consequent abusive strains on the entire valve mechanism. Using only one spring also reduces reciprocating weight.

Valve stem ends are now hardened to give longer life. Oil flow to the cylinders and piston pins has been more than doubled. Four rings are provided on the "steel strut" aluminum pistons used in this engine. They give a perfect gas seal and oil control.





## Unseen Improvements

Helical type oil pump gears are now standard and give silent operation even when starting up in cold weather.

Exhaust manifold vibration which used to cause a singing noise at certain speeds has been eliminated.

### "600" Engine

Remarkable improvements have been made in the "600" engine. Intake manifolds and valve passages have been

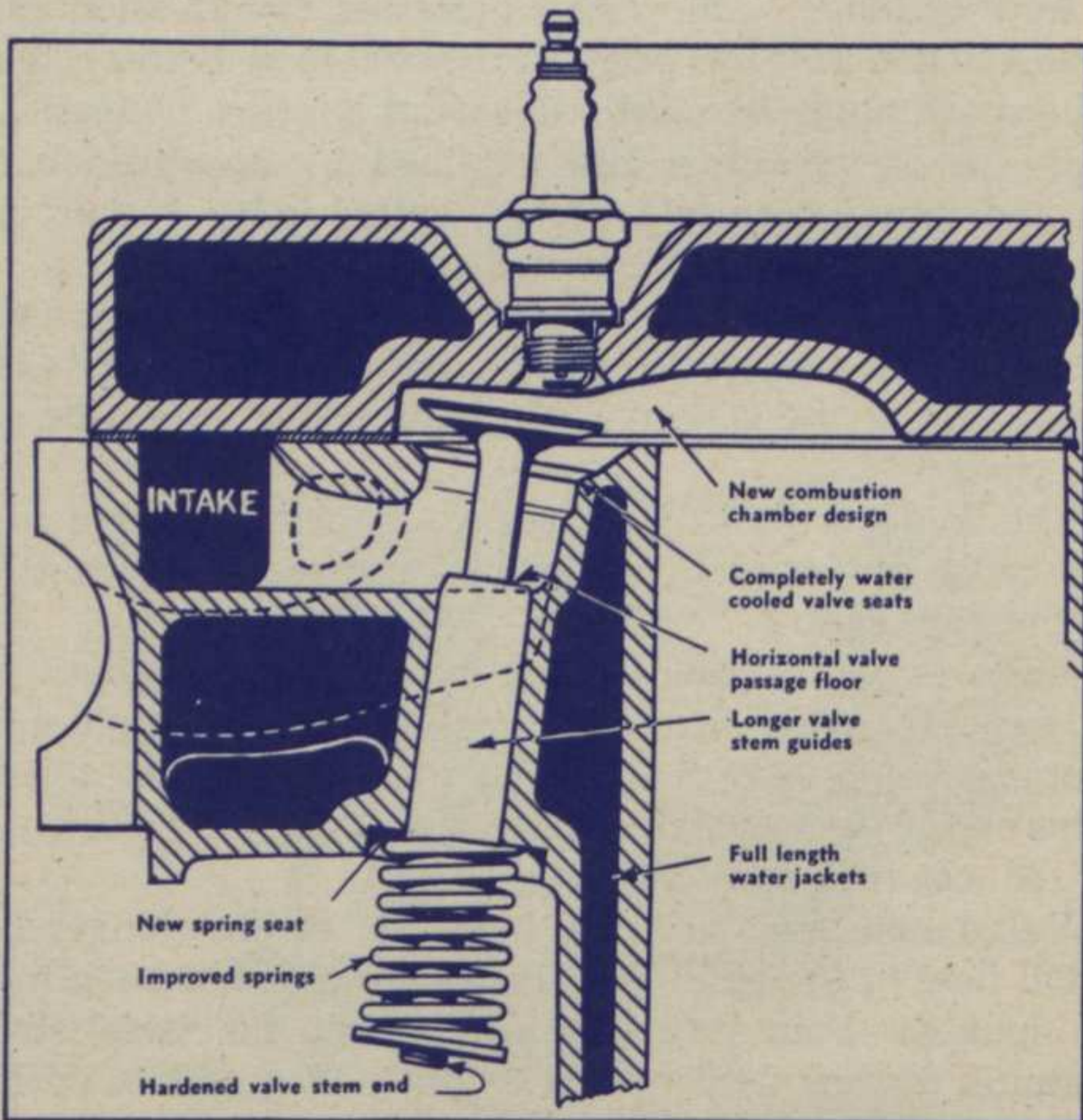


Fig. 11—Sectional sketch showing improvements in "600" cylinder.





## "600 Engine"

modified to assure uniform mixture to each cylinder. The intake manifold floor is now level so liquid fuel will not be trapped beneath the valves.

Larger intake valves ( $\frac{1}{8}$  in. greater diameter) and the improved valve passages also contribute to more and smoother power.

Adoption of a triple venturi type down-draft carburetor similar to that on the Ambassador has improved mixture distribution and power.

An automatic manifold liquid drain valve is a new device added to prevent flooding when starting in cold weather. It is merely a check valve in a drain line that normally is closed by vacuum when the engine is running, but which opens up immediately when the engine stops. This tube drains any accumulated liquid from the manifold onto the ground.

Longer valve guides are now provided due to the changes in the intake manifold. Better cooling of the exhaust valve seats has been accomplished by circulating water all around them and thus assuring longer valve life.

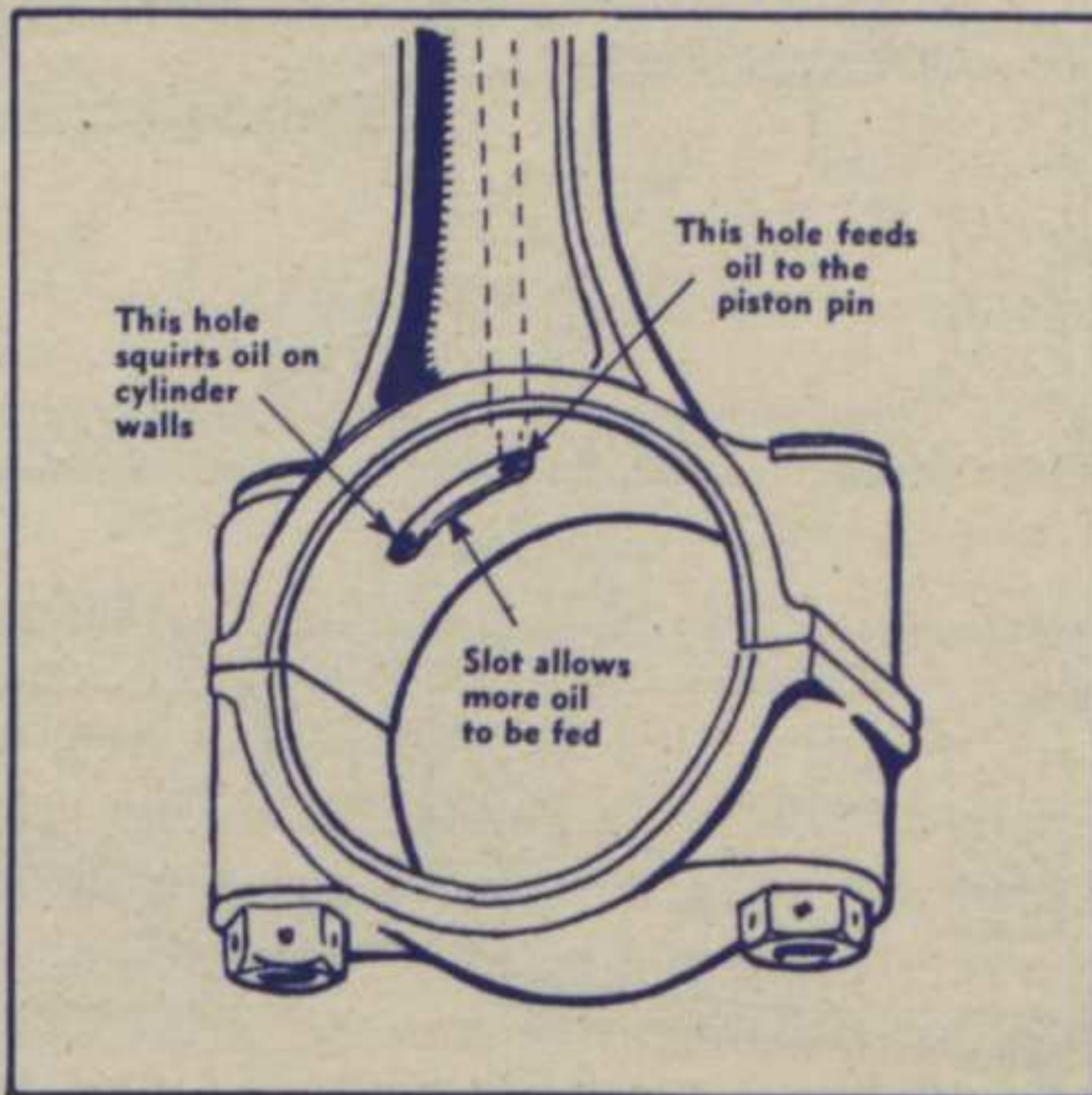


Fig. 12—Connecting rod improvements for better oiling of piston pin and cylinder.





## "600" Engine

Valves are also quieter because of the longer valve guides, accurate positioning of valve springs and improving parallelism of valve spring faces when compressed.

Other improvements include an oil seal on the ignition distributor shaft to prevent crankcase oil from working up into the breaker box; screws instead of bolts to hold the front oil pan in place (a service convenience); helical type oil pump gears that are always quiet even in cold weather starting; increase flow of oil to piston pins and cylinder walls and more oil delivered to valve timing chain.

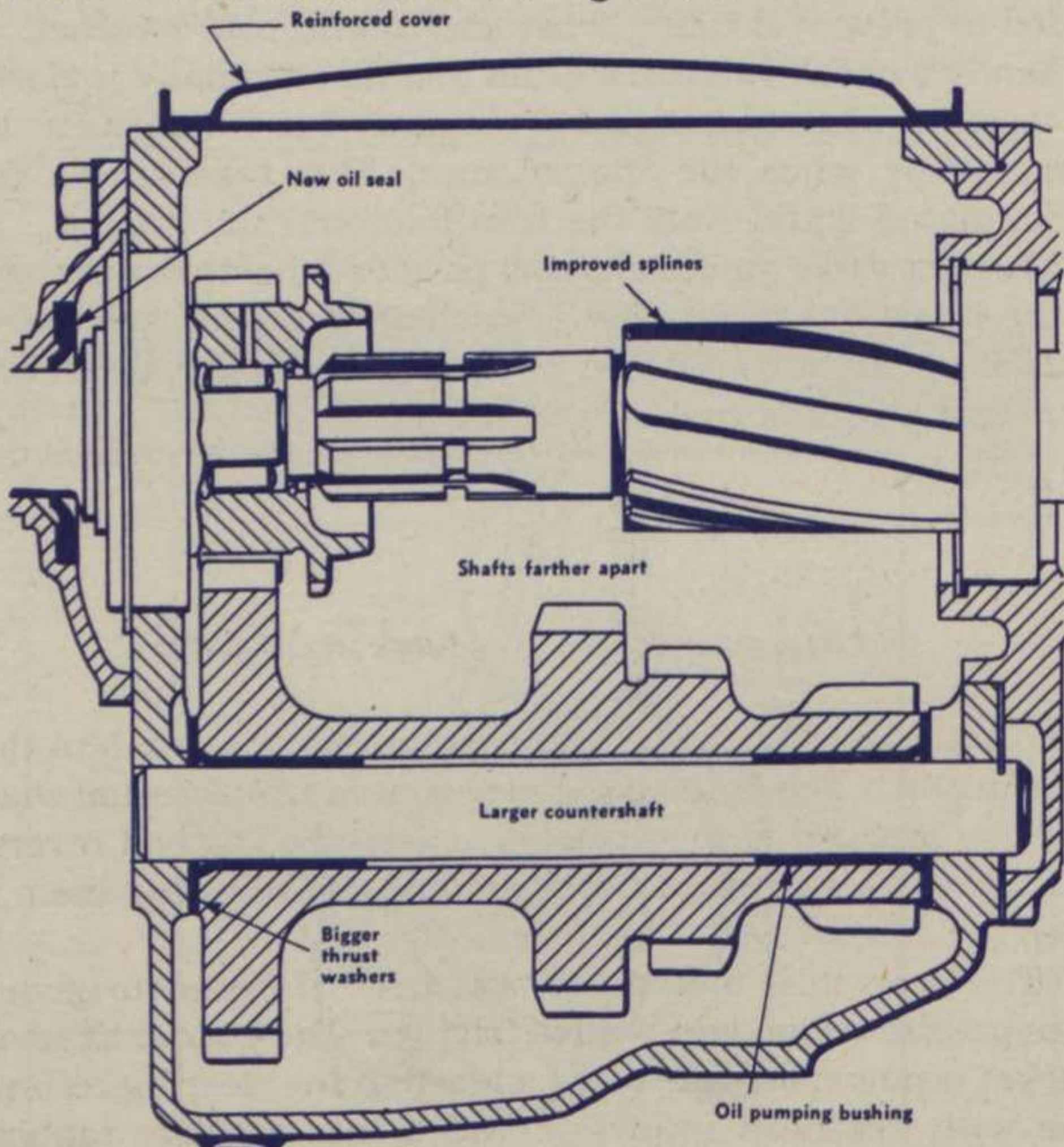


Fig. 13—Sectional sketch showing ruggedness of new Nash built transmission.





## *“600” Transmission*

1946 transmission is designed and built by Nash. It has much greater capacity. The main and countershafts are now 3 inches apart instead of  $2\frac{1}{2}$ . This decreased the bearing and tooth loads and greatly increased its life. Also both shafts have been increased in diameter, eliminating deflections which previously caused noise and excessive wear.

Heavy replaceable bronze thrust washers are now placed at each end of the countershaft.

A spiral groove in the rear countershaft bushing acts as a pump and forces oil through the front bushing and thrust washer thus providing positive pressure lubrication at these critical points.

Larger diameter synchronizers now make easier and quieter shifting. A special seal on the clutch gear shaft prevents oil leakage from the transmission. A heavier gauge cover on the side of the transmission now provides an oil tight seal. There is now a positive interlock inside the transmission case so only one gear can be meshed at a time—ball detents are also provided to keep gears in position once they are engaged. All of these detail improvements are designed to give trouble-free service.

## *Ambassador Transmission*

Numerous detail improvements will also be found in this transmission. The helix angle of the main transmission shaft has been changed so that it tends to keep the low and reverse gears in mesh instead of being neutral and allowing them to creep out of gear.

The gear shift mechanism has been stiffened to give a more precise action and reduce friction. The gear shift lever bracket is now more securely fastened to the steering column tube with hex-head screws threaded into a heavy tapping strip.





## Clutch

Clutch throwout shaft oilers have been added to maintain the soft smooth action of the clutch pedal.

Clutch and brake pedals both have long lubricated sleeves in the hubs to prevent wear and eliminate side wobble.

Cushion springs beneath the clutch facing have been stiffened so as to permit more gentle engagement of the clutch.

Facings on the opposite sides of the clutch disc are not alike: On one side a woven material is used, on the other, moulded. This gives a difference in friction that allows a smoother engagement without sacrifice of life.

Linkage between the clutch pedals and the clutch throwout shaft has been improved in its arrangement so that chatter is eliminated when engaging the clutch under certain conditions. The new linkage reduces the pedal pressure. An overcenter effect is also provided to relieve the driver of pressing against the entire clutch spring pressure when the pedal is fully depressed.

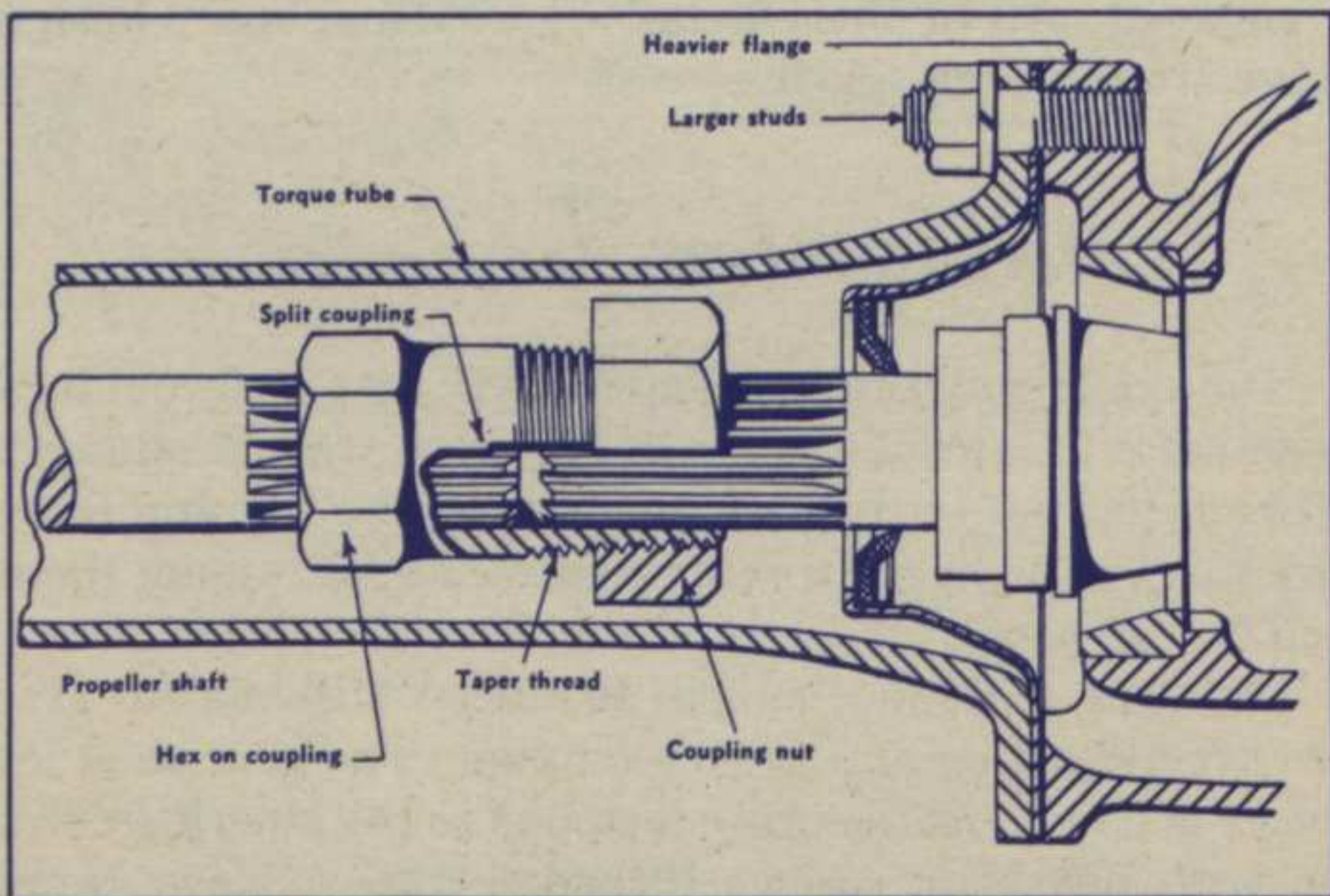


Fig. 14—Sketch of "600" improved propeller shaft coupling.





## *Unseen Improvements* *Chassis*

The "600" drive shaft coupling and torque tube axle flange have been improved. The torque tube flange on the axle housing is heavier and the holding studs have been increased to 7/16 in. dia.

The drive shaft split coupling threads are now chased through so the clamping nut will not stop before the coupling has been clamped tight against the splines. To prevent the shaft turning while tightening this nut, a hex is provided for a wrench on the front end of the coupling. Now a mechanic can tell when the nut is tight.

Another important detail is the new seal and drain in the rear axle, at the wheel bearings. This prevents oil working out into the rear wheel brake drums.

The flange on the rear axle tube, to which the track bar is attached, has been reinforced.

The track bar is also more rugged and has cylindrical rubber bushings at each end to afford a more rigid positioning of body and axle and thus prevent crabbing of the rear end when driving over rough roads.

The silencing ability of the muffler has been improved and the muffler tail pipe extended to reduce exhaust noise in the body and prevent fumes seeping into the car.

An improvement in holding ability of the hand brake of the Ambassador has been obtained by eliminating friction, increasing leverage and providing better cable pulleys.

The "600" roller type steering gear is now securely mounted on the body. The linkage to the wheels is carried on the front suspension member so the geometry of the linkage eliminates wheel fight, tire wear and permits "chalk line" steering accuracy.

Larger front wheel spindles and bearings are now provided thus greatly increasing the life and safety of these important parts.





## Get Behind the Wheel

To appreciate what wonderful cars NASH has for 1946, you must get behind the wheel. The new "snap" in the "600" will amaze those familiar with its prewar performance. This has been obtained without sacrificing its 25 to 30 miles per gallon economy. The Ambassador, always outstanding in all around performance, is faster, quieter, and easier riding than ever. 1946 Nash cars are a product dealers will be proud to sell because they are certain to give so much user satisfaction.

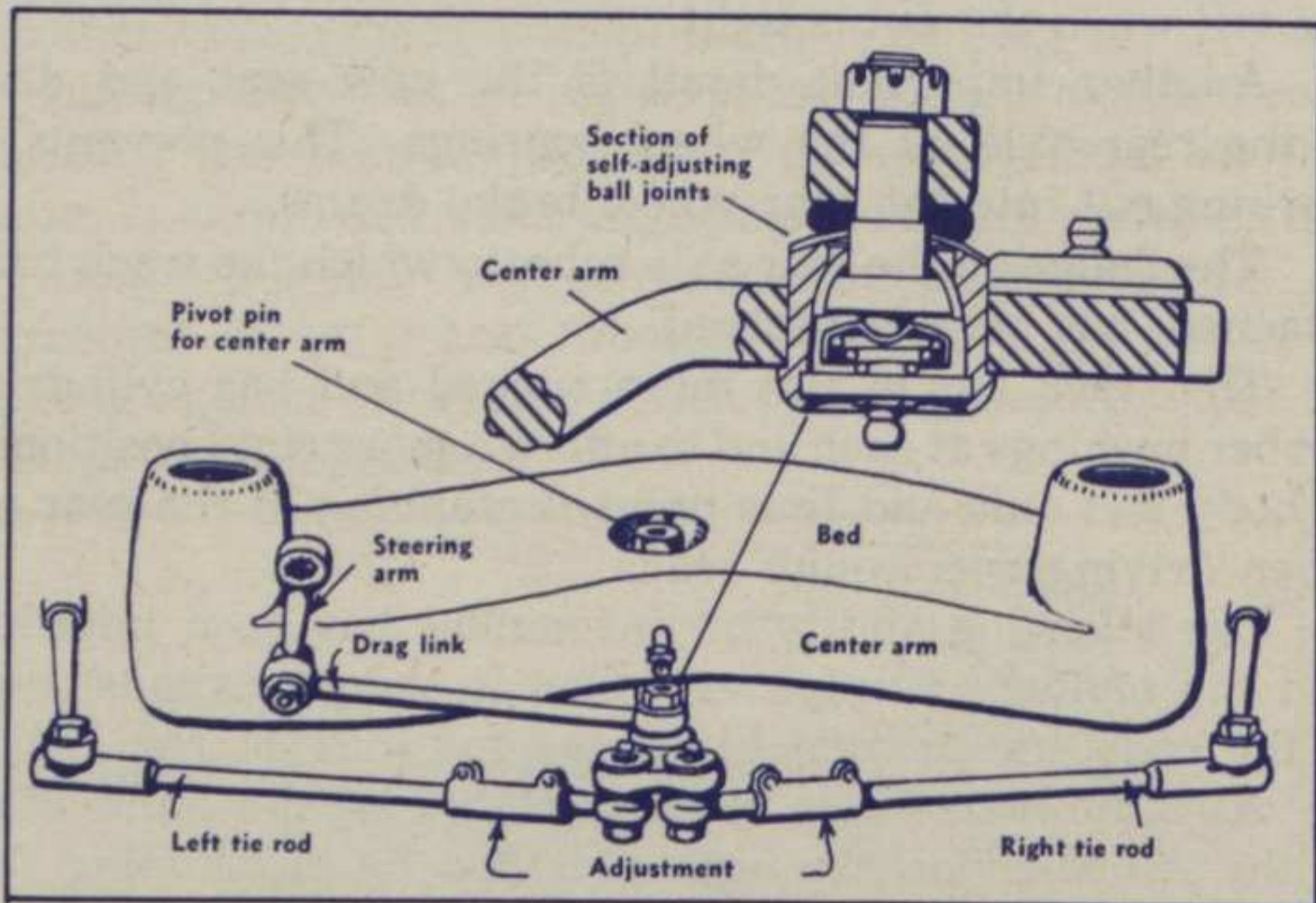


Fig. 15—Diagrammatic sketch of new "600" precision steering linkage.

Don't forget that NASH has, besides new improvements just enumerated, many time proven features. On the opposite page are listed thirty which in the past have helped NASH earn its good reputation.





## *Over 100 Improvements Plus These Time Proven Features*

1. Most spacious "Unitized" Body.
2. A gorgeous instrument panel.
3. 25 to 30 miles per gallon ("600").
4. Easy parking-maneuverability ("600").
5. Coil spring suspension on all four wheels ("600").
6. Independent front wheel springing.
7. Direct action double acting hydraulic shocks.
8. Tri-point rubber cushioned engine mounting.
9. Rubber insulation between road and body.
10. "Unitized" structure all steel body.
11. 100% Full Pressure Engine Lubrication.
12. Rifle bored connecting rods.
13. Precision type bearing bushings.
14. Counter balanced crankshaft.
15. Crankshaft rubber vibration Damper.
16. Crankcase ventilation.
17. Transverse flow radiator with pressure cooling.
18. Full length cylinder water jackets.
19. "Sealed in" intake manifolds.
20. Extra hard cylinder blocks for long life.
21. Completely water cooled valve seats.
22. Steel strut aluminum pistons.
23. Automatic Choke.
24. Clutch pedal starter.
25. Automatically controlled air cooled generator.
26. Dual automatic spark control.
27. Sealed Beam headlamps.
28. Hydraulic four wheel brakes.
29. Cast iron brake drums for long life.
30. Dual roller type steering gear.

These are all found on 1946 NASH cars—NEW in style—over 100 NEW improvements—plus OLD time tried features that provide a new SUPERIOR QUALITY NASH for 1946.





## Brief Specifications

	"600"	"Ambassador"
Horsepower, Maximum .....	80	112
Horsepower, Taxable .....	23.4	27.3
Speed at Max. H. P., rpm.....	3,800	3,600
Number of Cylinders .....	Six	Six
Bore, inches .....	3 $\frac{1}{8}$	3 $\frac{3}{8}$
Stroke, inches .....	3 $\frac{3}{4}$	4 $\frac{3}{8}$
Piston Displacement, cu. in. ....	172.6	234
Comp. Ratio .....	6.8	6.8
Overall Length, inches .....	196 $\frac{1}{2}$	205 $\frac{1}{2}$
Wheelbase, inches .....	112	121
Weight (shipping 4 Door Sedan) lbs. .	2,655	3,340
Tire Size (Deluxe) .....	6.00x16	6.50x15
Rear Axle Gears .....	Hypoid	Hypoid
Rear Axle Gear Ratio .....	4.1 to 1	4.1 to 1
Front Springs, Type .....	Coil	Coil
Rear Springs, Type .....	Coil	Lubricated (semi-Elliptic)
Ride Stabilizer, Front .....	None	Yes
Ride Stabilizer, Rear .....	Yes	None





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# Nash 1946

## Standard Equipment

(Deluxe Models)

Spare wheel (and tire when available)	Rear fender gravel pads
No-draft ventilation	Door lock on left- and right-hand sides
Hi-test safety glass	Glove compartment lock
Deluxe bumpers	Deluxe steering wheel
Two bumper guards, front and rear	Rear quarter ventilating windows
Dual horns	Combination plastic and lacquered radio grille
Dual sun visors	Rotary door locks
Dual windshield wipers	Sealed beam headlights
Front door arm rests	Robe Cord (4-door sedan)
Dome light	Stainless steel running-board moldings
Cigar lighter, front	Carpet insert in front floor mat
Instrument panel ash tray	Voltage control generator
Ash tray—rear compartment—center.....	(4-door sedan)
Ash tray—rear compartment—quarter.....	(2-door sedan and brougham)
Assist cords.....	(2-door and 4-door sedans)
Robe cord.....	(4-door sedan)
Clock electric*.....	Clock, wind type ("600" Series)
Oil filter*	Automatic choke*
	Chrome window reveals*

### EXTRA CHARGE EQUIPMENT WHEN AVAILABLE

Foam rubber cushions	Radio and antenna
Cruising gear*	Directional signals
Conditioned air system	Oil bath air cleaner
Vacuum booster pump	Oil filter on "600"

\*NOTE: Available only on Ambassador Series.



**NOTE:**

**Although the data contained herein is as accurate as possible, we reserve the right to make changes when necessitated by conditions and restrictions.**



*Nash*

