

1930 NASH "400"

TWIN-IGNITION EIGHT


PRICED FROM \$1625 TO \$2260
f. o. b. factory

TWIN-IGNITION SIX

PRICED FROM \$1295 TO \$1695
f. o. b. factory

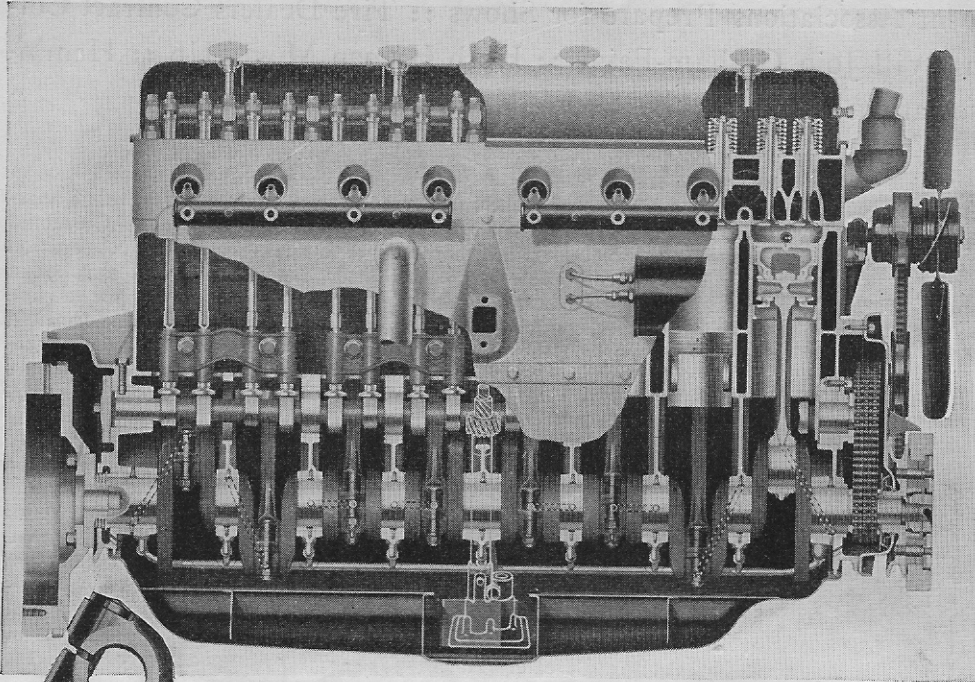
SINGLE SIX

PRICED FROM \$915 TO \$1075
f. o. b. factory

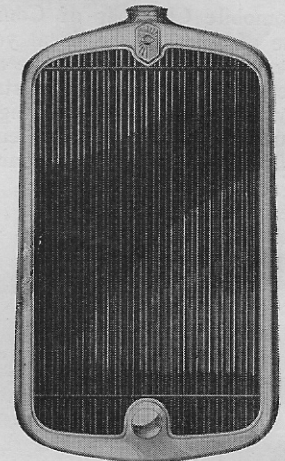
"Worthy Successors to a Great Success"—these three brilliant new 1930 Nash "400s" will entrench Nash even more firmly in public favor.  For information concerning territory, write the Sales Department, Nash Motors Co., Kenosha, Wisconsin.

(1242)

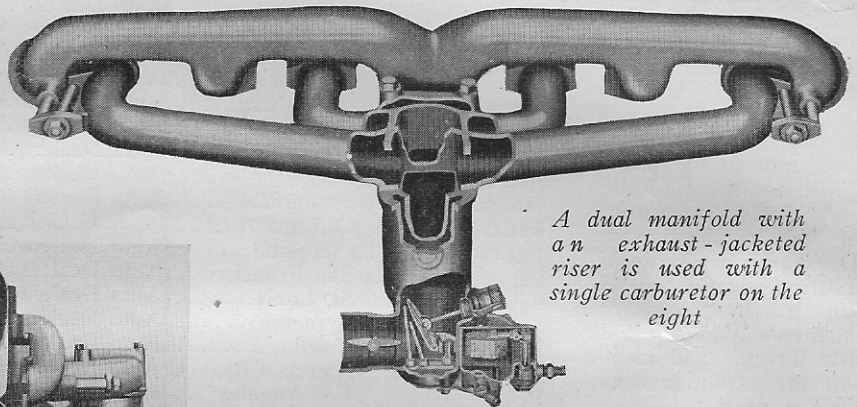
NASH "400"—Twin-Ignition 8



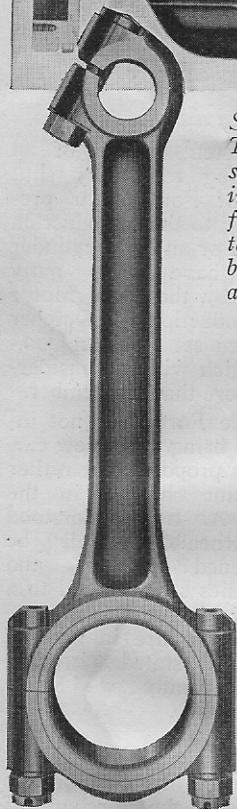
Section through Twin-Ignition Eight showing nine-bearing crankshaft with four integral counter-weights, new vibration dampener and chain camshaft drive



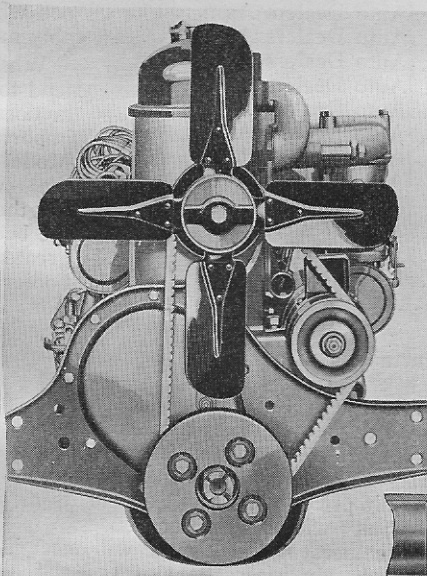
All Nash cars now have automatic shutters



A dual manifold with an exhaust-jacketed riser is used with a single carburetor on the eight



An aluminum alloy connecting-rod with a steel cap on the lower end enhances the smoothness of the engine

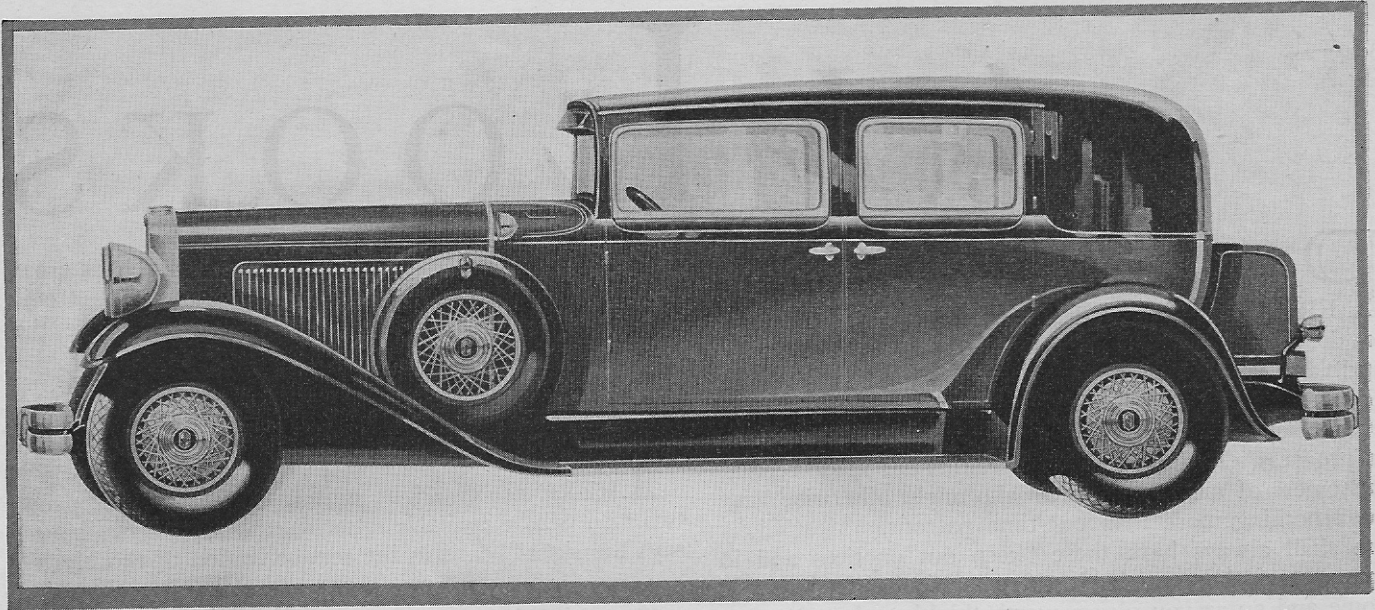


Right—Section through new vibration dampener showing the dampener "flywheel" driven through four rubber bushings. Above—Another view of the dampener

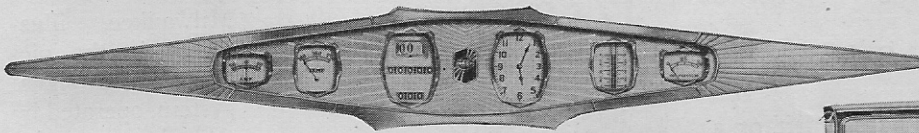
NASH announces a "Twin-Ignition" Eight to replace the Advanced Six. The Special Six and the Standard Six are continued with important refinements but have new names, being called respectively, the Twin-Ignition Six and the Single Six. Hoods and bodies are larger and the appearance of all models has been refined. Non-shatterable glass is used throughout the eight.

The eight has most pleasing lines, is built in two wheelbase lengths, 124 and 133 inches and is equipped with a $3\frac{1}{4}$ by $4\frac{1}{2}$ inch overhead-valve engine which is rated at 100 horsepower. Piston displacement is 298.6.

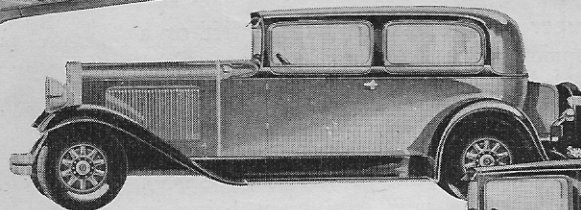
The Twin-Ignition Six has similarly attractive body models some of which have a wheelbase of 118 inches while others are $128\frac{1}{4}$. The previous wheelbase was 116 inches. It has greater power due to a $\frac{1}{8}$ -inch increase in bore, the new cylinder dimensions being $3\frac{3}{8}$ and $4\frac{1}{2}$.



This attractive model is the five-passenger Ambassador on the Twin-Ignition Eight chassis

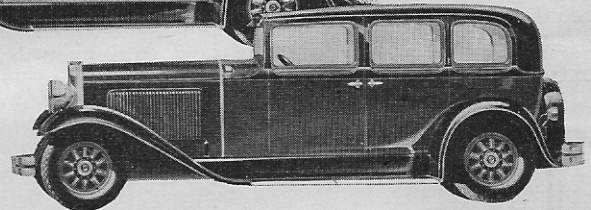


NEW EIGHT Replaces Advanced Six — Twin-Ignition Six and Single Six Are Continued Models — Numerous Interesting Improvements Throughout 1930 Offering



Eight-cylinder, five-passenger, two-door sedan

Five-passenger, four-door, eight-cylinder sedan



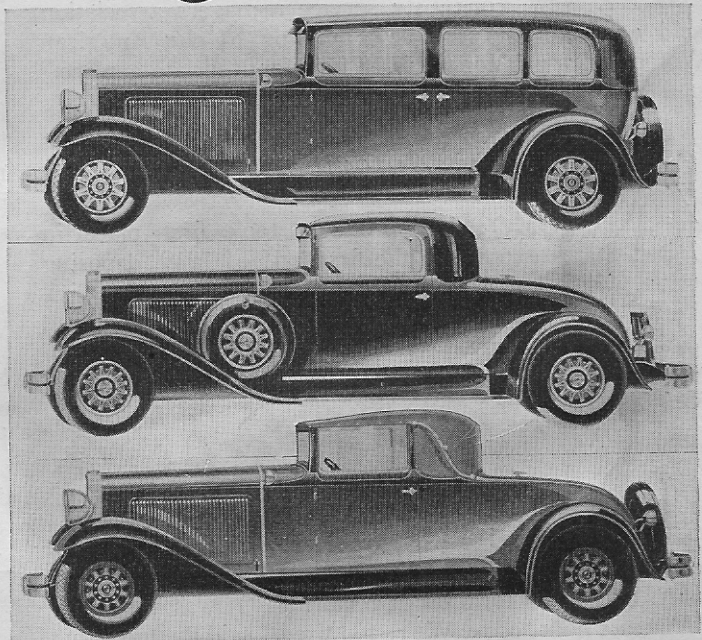
The Single Six also is more beautiful and has numerous improvements including a larger engine secured by lengthening the stroke from 4 to 4 $\frac{3}{8}$ inches while the bore remains 3 $\frac{1}{8}$. The wheelbase is 114 $\frac{1}{4}$ inches, an increase of 2 inches.

Cable-operated, self-energizing internal brakes, described as equally effective in both directions, are used on all chassis. All cars possess the new Nash vibration dampener, all have bored crankpins and the Single Six crankshaft is fully machined. All have the AC fuel pump and filter, and central chassis lubrication. The pedal-operated Bijur system is used on the Twin-Ignition models while the Single Six has the automatic system produced by Alemite. This system, fully described on page 204, uses a small weight which vibrates whenever the car is in motion, to pump the lubricant to the various points on the chassis.

Single-acting Lovejoys are equipment on the Single Six while two-way Lovejoys are used on the Twin-Ignition cars, the link between shock absorber and axle being provided with rubber insulated, graphite bronze bushings requiring no lubrication. In all cases the shock absorber unit is mounted direct to the frame, without brackets.

ALL cars have rubber engine mountings at four points dash-operated starter, adjustable front seats, twin cowl ventilators, felt-insulated floor boards and dash, automatic radiator shutters which open at 145 degrees Fahrenheit. Twin-Ignition models have permanent all-metal spring covers, an automatic clutch on the fan which slips at 35 miles per hour, silent three-strand roller chain camshaft drive, and all chassis have generator, fan and water pump driven by a corrugated Vee belt.

Price ranges are: Single Six, \$915 to \$1075; Twin-Ignition Six, \$1295 to \$1695; Twin-Ignition Eight, \$1625 to \$2260. Considering its added features (Continued on page 194)



*Eight-cylinder, seven-passenger sedan
Twin Ignition Eight, two-passenger coupe
Four-passenger, eight-cylinder cabriolet*



"I'll Stop for Them Saturday"

Now is the time to repair all curtains—before winter actually sets in—so there is no inconvenience to the car owner or his passengers.

Your customers need never feel discomfort in open car driving if you protect them against the cold winds, rain, and snow of winter with Kodaloid—Eastman Transparent Sheeting.

And when you render this service you give your customers the advantages of the unique Kodaloid features . . . glass-clear transparency . . . natural lustrous surface . . . extra tensile strength . . . uniform thickness. They will build quality in the customer's mind.

The coupon below will bring you the name of the nearest Kodaloid jobber.

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Chemical Sales Department,
365 State Street, Rochester, N. Y.

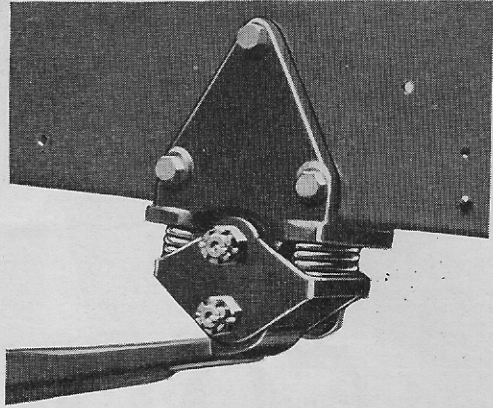
Gentlemen:

Please send me the name of the nearest jobber selling Kodaloid.

Name _____

Street and Number _____

City and State _____



Shock-eliminating shackle on rear of left front spring Nash Twin-Ignition Eight.

The Nash "400" Eight

(Continued from page 55)

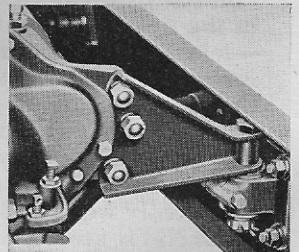
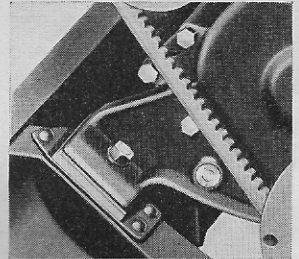
including two more cylinders the Twin-Ignition Eight is but moderately higher than the previous six, the increases running from \$70 to \$145. The Twin-Ignition Six and the Single Six are just a trifle higher-priced, increase in the former ranging from \$10 to \$50 with the exception of one model which is \$175 more, while increases in the latter are \$20 to \$40 except one which is advanced \$80. A complete list of body models and prices will be found on page 76.

Every effort has been made in the development of the new eight to make it as smooth and powerful as possible. The nine-bearing crankshaft is equipped with four integrally-forged counter-weights, and a new-style torsional vibration dampener wherein the dampener "flywheel" is driven from the front end of the crankshaft through the medium of four rubber blocks or bushings. Crankpins are bored out both to relieve main-bearing wear due to centrifugal force and also to fully minimize any tendency to torsional crankshaft vibration.

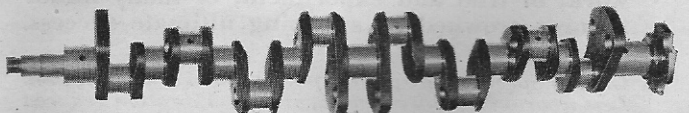
Pistons are the aluminum invar-strut type with four rings above the pin, including one for oil control. Connecting rods are a special aluminum alloy but their caps are forged steel so as to prevent undue expansion of the crankpin bearings when engine temperatures are high. The light connecting-rods, of course, are of considerable assistance in securing maximum smoothness. The rod is clamped to the wristpin, the clamp screw threading into a steel bushing, since aluminum does not possess fully adequate thread strength.

The camshaft is mounted in six bearings, the valves have dual springs, the long push-rods are hollow for lightness, and the camshaft drive as already mentioned is by silent chain.

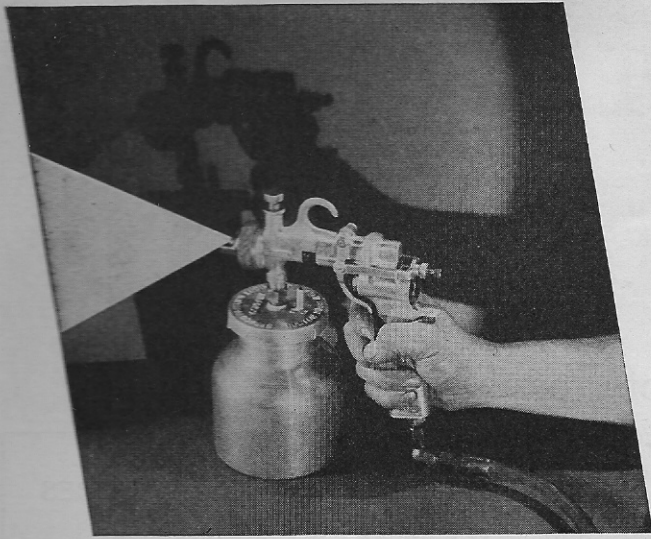
Oil is supplied under pressure by a gear pump in the base of the oil pan to all nine main (Continued on page 198)



Above—Rubber front and rear engine mountings. Left—Metal covered spring



Eight-cylinder counter weighted crankshaft with hollow crankpins



Spraco Guns

save



TIME

four of your guns, have compared them with two other types of guns and find yours to be faster in operation and equal in quality of work.

In actual tests conducted in the plant of an Ohio company, an operator using different makes of guns using the same lacquer and spraying identical pieces—turned out 20% more work with the Spraco Gun than with any of the others—and laid on a smoother finish.

Another user writes, "We are using

four of your guns, have compared them with two other types of guns and find yours to be faster in operation and equal in quality of work.

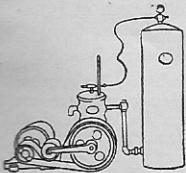


MATERIAL

Because of its properly atomized "wet" spray, one stroke with a Spraco Gun lays on as smooth a coat as two or more strokes of a high pressure gun and less material is required to produce a satisfactory finish.

Requiring only moderate air pressure, Spraco Guns deliver a fine, uniform spray that is "wet" its entire width and will not split. Drift, caused by an excessive volume of air at high pressure, is eliminated; material ordinarily blown through the fan as dry mist is saved.

Because of its properly atomized "wet" spray, one stroke with a Spraco Gun lays on as smooth a coat as two or more strokes of a high pressure gun and less material is required to produce a satisfactory finish.



POWER

to be operated on your present equipment.

Power necessary to operate a Spraco 14-A Gun (45-65 lbs. per sq. in.; approximately 6 cubic feet of air per min.) is considerably less than that required for other guns using higher pressures and a greater air volume. The low air volume consumption of Spraco Guns saves many power dollars in the course of a year—permits more guns

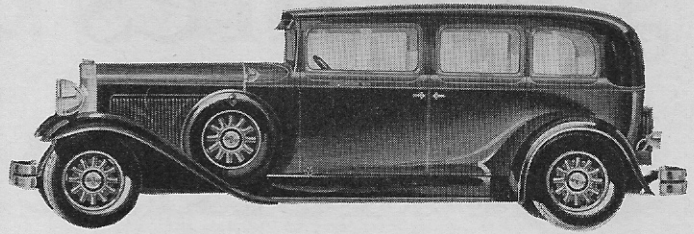
Simple to adjust, operate and clean, Spraco Guns have many advantages not found in ordinary guns. Write for Bulletins giving complete description of guns, tanks, booths, compressors and all necessary accessories.

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111 CENTRAL STREET SOMERVILLE, MASS.

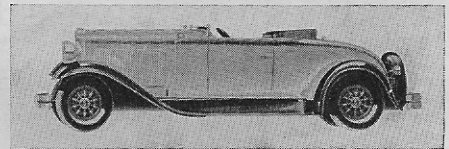
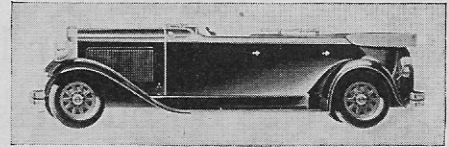
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The Nash "400" Eight

(Continued from page 194)



Above—Twin Ignition Six seven-passenger four-door sedan. Right—Twin Ignition Six five-passenger touring car with tonneau windshield and cowl and Twin Ignition Six four-passenger roadster



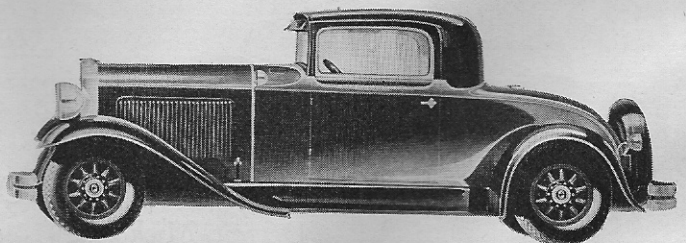
bearings and from thence through drilled crankshaft to the connecting-rod bearings. Camshaft and rocker shaft are also pressure oiled. A screen surrounds the pump and there is also an external oil filter. Two spurt holes in the big end of each connecting-rod deliver oil to cylinders, pistons and valve mechanism.

The carburetor is a Marvel with three jets, the third one cutting in above 50 miles per hour. The single carburetor with an exhaust-jacketed riser is attached to a dual manifold. An air cleaner and a crankcase ventilating system are fitted. Sixteen metric "airplane type" spark plugs are used, two spark plugs for each cylinder, firing from opposite sides of the combustion chamber. The plugs are individually fed by sixteen high-tension wires leading from the distributor, with a separate breaker arm and coil for each set of eight plugs. Due to an improved form of combustion chamber it is stated that compression is even higher than in the previous Nash six.

The engine is mounted in rubber at four points. The clutch is a single plate, the transmission has three speeds, the drive shaft has a metal universal at the forward end and a fabric universal at the rear, and the rear axle is semi-floating.

Twin-Ignition models have two-shoe brakes and the Single Six has a single-shoe design—all internal self-energizing. The brake-actuating mechanism is unique in that cables are used to completely replace the customary brake rod assemblies running to the four wheels. Both the pedal and the hand lever operate a full-floating brake cross shaft which in turn rotates a double bell crank at either end. To each end of each bell crank it attached a cable which runs along the frame to a point where it enters a flexible tube, through which it passes to the lever which rotates the cam which expands the brake.

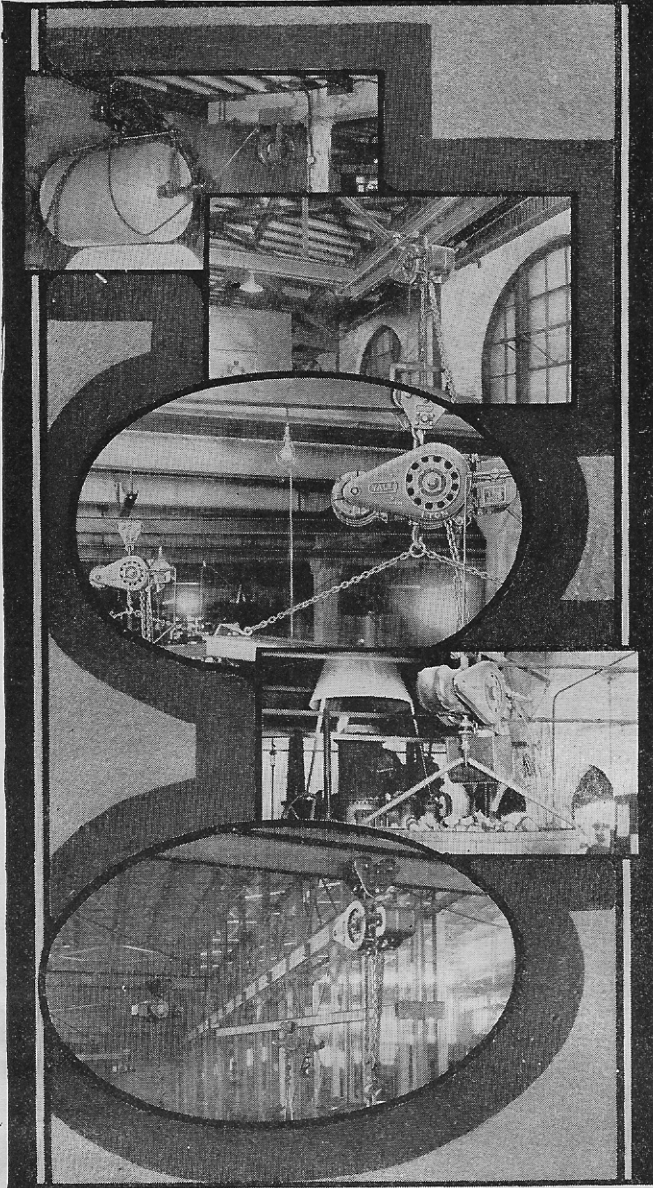
The tube is made of a specially-designed, heavy coiled spring, fabric covered and filled with grease. The tube, of course, provides a "constant length" for the cable regardless of road wheel position. This new system eliminates all lubrication points and possibility of rattles. (Cont'd on page 200)



Twin-Ignition Six four-passenger coupe

TRADE **YALE** MARK

Yale Ball-Bearing Electric Chain Hoists serve many industries with great efficiency and low maintenance.



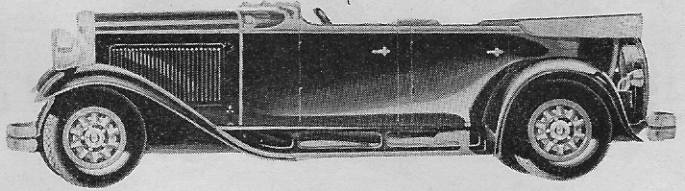
Yale Electric Chain Hoists speed up the time of handling a product and can be found at work in a wide variety of industries: Electric railway shops; Paper printing plants; Metal working plants; Fertilizer plants; the Iron and Steel Industries, etc. ☐ Made in a wide range of sizes and speeds from 1/4 ton to 2 tons capacity. ☐ All Yale Hoists are built from the best materials and by skilled workmen. The name Yale signifies the highest quality product.

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STAMFORD CONN., U. S. A.

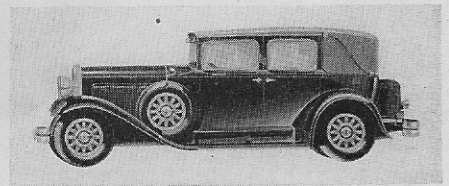
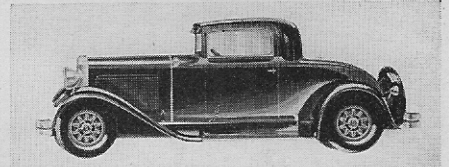
YALE MARKED IS YALE MADE



Hoisting and Conveying Systems



Three Single Six models. Above—The five-passenger touring car. Right—The four-passenger rumble seat coupe and the five-passenger landaulet



Two fundamentals made this new design possible. The cable is a new non-stretch type wherein each of the fifty-one strands is first formed to the shape it will later occupy in the cable, and therefore when the strands are assembled the customary stretch is avoided. The other feature which permits a full cable actuation is the development of a welding process for attaching the cable to the yoke at each end which absolutely eliminates any danger of loosening.

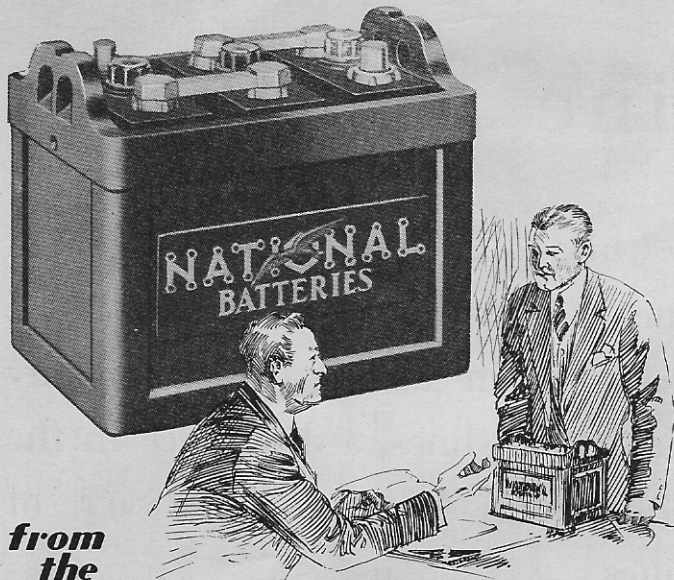
SPRINGS are half-elliptic, and are sheathed in permanent, grease-filled articulated metal covers as illustrated on page 194. With these covers, spring clips are unnecessary. The front springs are shackled at the front and the rear end of the left front spring is also supplied with a coil-spring-controlled shackle which eliminates road shock at the steering wheel as well as killing any tendency to shimmy. The steering gear is a worm-and-roller type.

As compared to the Nash Advanced Six, the new Twin-Ignition Eight has a longer and stronger frame. Flanges are 1/2 inch broader, the front cross-member is far heavier, and the frame is wider at the rear for greater seating comfort. As heretofore the frame is a double drop design.

In general the features on the Twin-Ignition Eight are also found on the Twin-Ignition Six, the only exception which comes to mind being the elimination of the extra spring shackle at the rear of the left front spring. Intake valves have been enlarged to give greater power. The 1/8 inch greater bore, the increase in wheelbase and other new features have already been mentioned. The Twin-Ignition Six line possesses two seven-passenger models, a sedan and touring car on a wheelbase of 128 1/4 inches. This wheelbase is also used for the five-passenger touring with tonneau cowl.

THE Single Six, like its predecessor, has an L-head engine and one spark plug per cylinder. The stroke is 3/8 inch longer and larger intake valves are used with the result that the engine is rated at 60 horsepower. Radiator, fan and water pump are larger. Other new features, which have not already been mentioned, are summarized in some of the succeeding paragraphs.

The Twin-Ignition Six and Eight models are similarly equipped except that the eight has a block on the instrument board and a few other minor details. The following features are common to both the Twin-Ignition Six and Eight: Lovejoy double acting hydraulic shock absorbers, Bijur centralized chassis lubricating system, automatic thermostatically controlled radiator shutters, all-metal spring covers, oil filter, gasoline pump equipped with (Continued on page 202)



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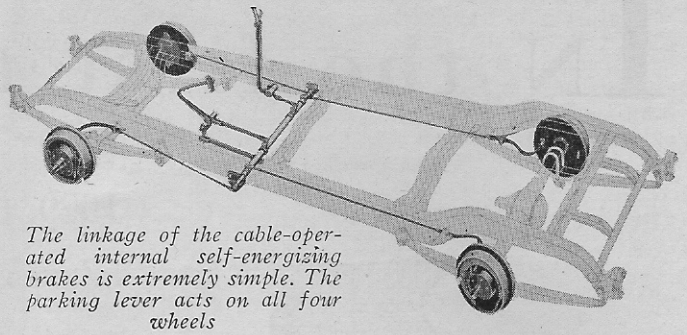
Remember—only the NATIONAL “checks” on all of the five vital points. Compare them with your present battery proposition. Write today for details of this complete business proposition.

There may be an excellent opportunity for you to secure a profitable NATIONAL franchise in your territory. Now is the time to start because the extra profit opportunities will mean more volume, more profit and more satisfied customers for you.

NATIONAL BATTERY CO., General Offices, St. Paul, Minn., U. S. A., Branches: Chicago, Kansas City, Los Angeles, North Bergen, N. J., Oakland, Baltimore, Seattle, Atlanta, Dallas, Cincinnati, Portland, Detroit, St. Louis, Spokane, Boston, Birmingham, Chicago Heights, Houston, Denver, Albany.

NATIONAL

BATTERIES



The linkage of the cable-operated internal self-energizing brakes is extremely simple. The parking lever acts on all four wheels

strainer, air cleaner and crankcase ventilator.

Four-spoke steering wheel with steel core encased in hard rubber; throttle, spark control lever and lighting switch finished in nickel and mounted on steering wheel with horn button in center. Engine thermometer, hydrostatic gasoline gauge, speedometer, oil pressure gauge and ammeter, grouped in indirectly illuminated satin silver finished instrument panel mounted on instrument board. Starter button, choke button, coincidental ignition and transmission lock and carburetor heat control lever within easy reach on instrument board.

Twin ventilators on top of cowl with operating levers directly underneath instrument board. Rubber covered pads on brake and clutch foot pedals. Nickel-plated gear shift lever with hard rubber ball mounted forward on center of toe board. Nickel-plated and black japan finished parking brake conveniently located at left of driver. Rubber covered aluminum pedal type accelerator. Twin automatic windshield wipers. Non-glare rear view mirror. Chromium plated head lamps and standards, cowl lamps and combined stop and tail lights. Cowl lamps have reflectors and lenses similar to head lamps. Remote control door handles. Hardware, satin silver finished inside, chromium plated outside. One-piece fenders.

All sedan models are upholstered in mohair, and have adjustable driver's seat, ball-bearing crank operated wind-shield, rear side arm rests, shirred pockets in rear doors. dome light, foot rest and vanity and smoking sets. The two-door sedan has built-in rear trunk. All four-door sedans have robe rail on back of front seat. The seven-passenger sedan has mohair or broadcloth upholstery, optional, and two folding auxiliary seats in rear tonneau.

THE coupes are upholstered in mohair and have adjustable driver's seat, ball-bearing crank operated windshield, dome light, compartment back of driver's seat, a lock-type door handle on rear deck door, and a golf bag compartment door on right hand side with lock. The coupe has rumble seat has an adjustable rear window.

The victoria is upholstered in mohair, has adjustable driver's seat, folding auxiliary seat, ball-bearing crank operated windshield, dome light, baggage compartment back of driver's seat, and a lock-type door handle on rear deck door.

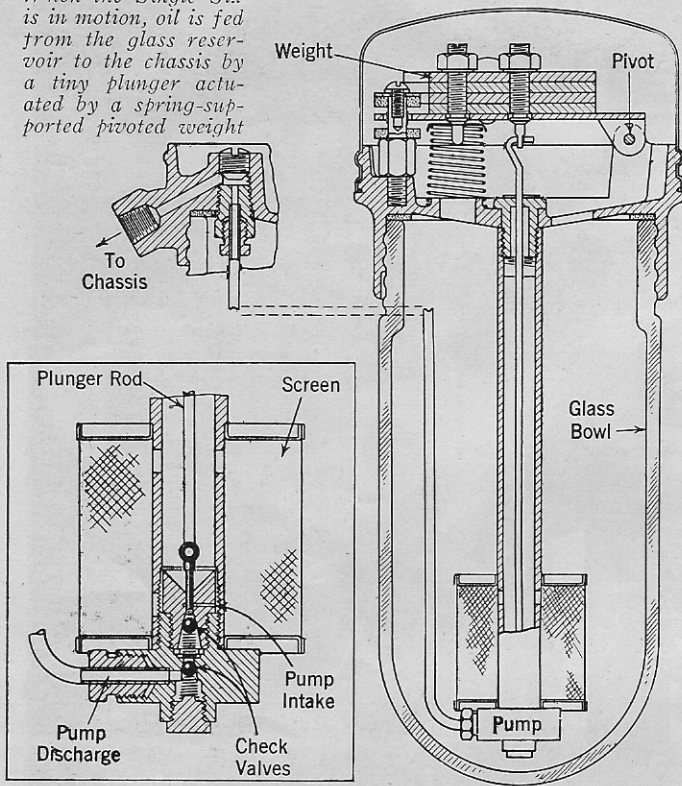
The cabriolet is upholstered in leather and has folding top, windshield has side tilt arms with wing nuts, compartment at the back of driver's seat, lock-type door handle on rear deck rumble seat door, and golf bag compartment door on right hand side with lock.

The roadster is upholstered in leather, has folding windshield, folding top with side curtains and top boot, large pocket in doors, lock-type door handle on rear deck rumble seat and golf bag compartment door on right with lock.

The deluxe five-passenger touring car is upholstered in leather, with folding windshield, folding top with top boot and side curtains that open with doors. It also has a second cowl with folding windshield in rear tonneau. The doors have large pockets, there is a large package compartment in back of front seat, rear seat side arm rests, foot rest in rear tonneau.

The seven-passenger touring car is upholstered in leather

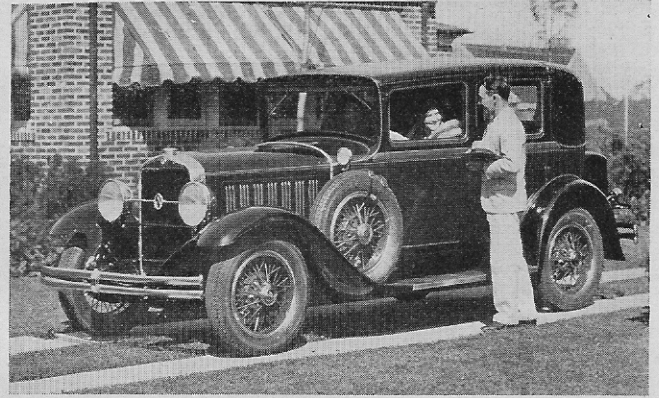
When the Single Six is in motion, oil is fed from the glass reservoir to the chassis by a tiny plunger actuated by a spring-supported pivoted weight



and has folding windshield, folding top with top boot and side curtains that open with doors; two folding auxiliary seats, large pockets in doors, robe rail on back of front seat, and foot rest in rear tonneau.

The equipment on the Single Six is quite similar to that on the two larger lines but there are a few differences. The Single Six has an automatic chassis lubricating system as shown at left. Self-adjusting spring shackles are used while the metal spring covers are omitted. The coincidental ignition and transmission lock is mounted on the steering column instead of on the instrument board. A single automatic windshield wiper is used. The steering-wheel has three spokes. The Lovejoy shock absorbers are single acting.

Studebaker Dictator 6 and 8 Broughams



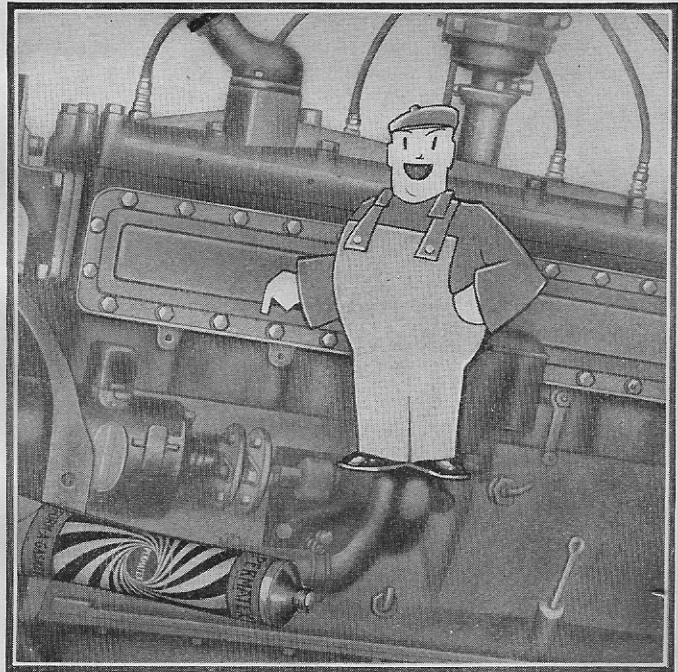
THE Studebaker Dictator Brougham is an attractive new body model which sells for \$1225 on the six-cylinder chassis and \$1365 on the eight. Equipment includes six wire wheels with the spares in the front fenders, and a roomy trunk. The Dictator Eight body is Cyprus green, wheels are Makinak green, the belt panel is Vernon green, and the running gear is black. The Dictator Six has a chocolate brown body with ivory striping and maroon wheels.

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