

Visualized Specifications of the
New Style Willys-Knight Six
Retail Sales Manager's Film Service

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One in a series of original filmstrips preserved for their historical value and presented to the members of the

[Willys Overland Knight Registry](#)

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July, 2000

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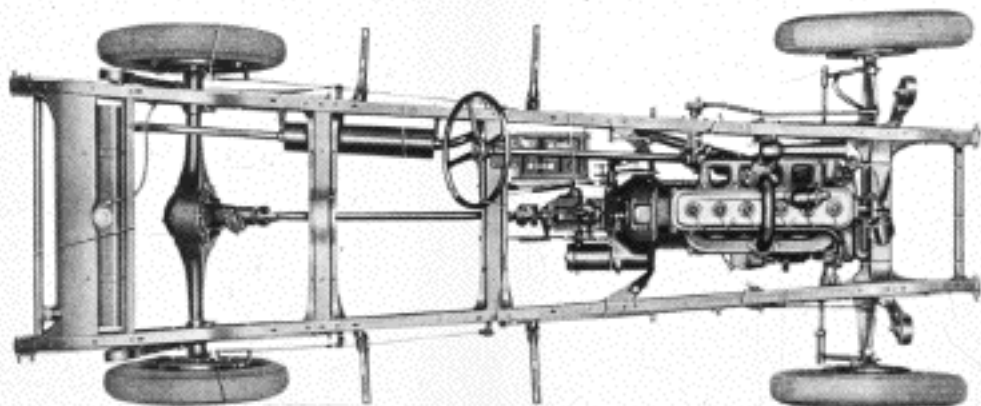
Visualized Specifications
of the
NEW STYLE
WILLYS~KNIGHT SIX.

The background of the advertisement features two dark silhouettes against a light, textured background. On the left, the rear profile of a Willys-Knight Six car is visible, showing its boxy 1920s design with several windows. On the right, a knight in full armor is depicted riding a horse and holding a lance aloft, a classic symbol of chivalry. The entire scene is framed by a double-line border.

Retail Sales Manager's Film Service.

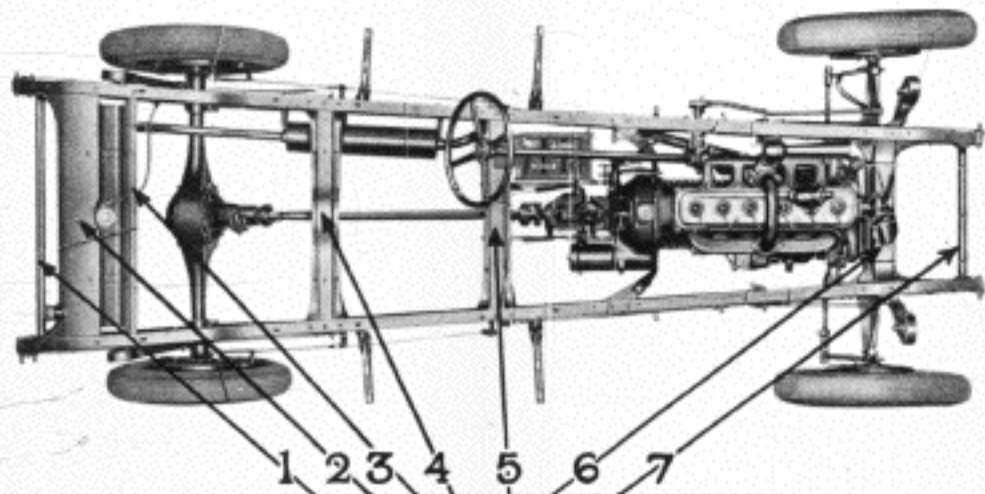
By its performance you will
recognize it is the most unusual
value ever offered in a Knight-
engined motor car.

We have visualized, in actual photographs, some of the advantages of the NEW STYLE WILLYS-KNIGHT SIX so you may *see* how deep down into every part of the car its mechanical perfection has been carried.

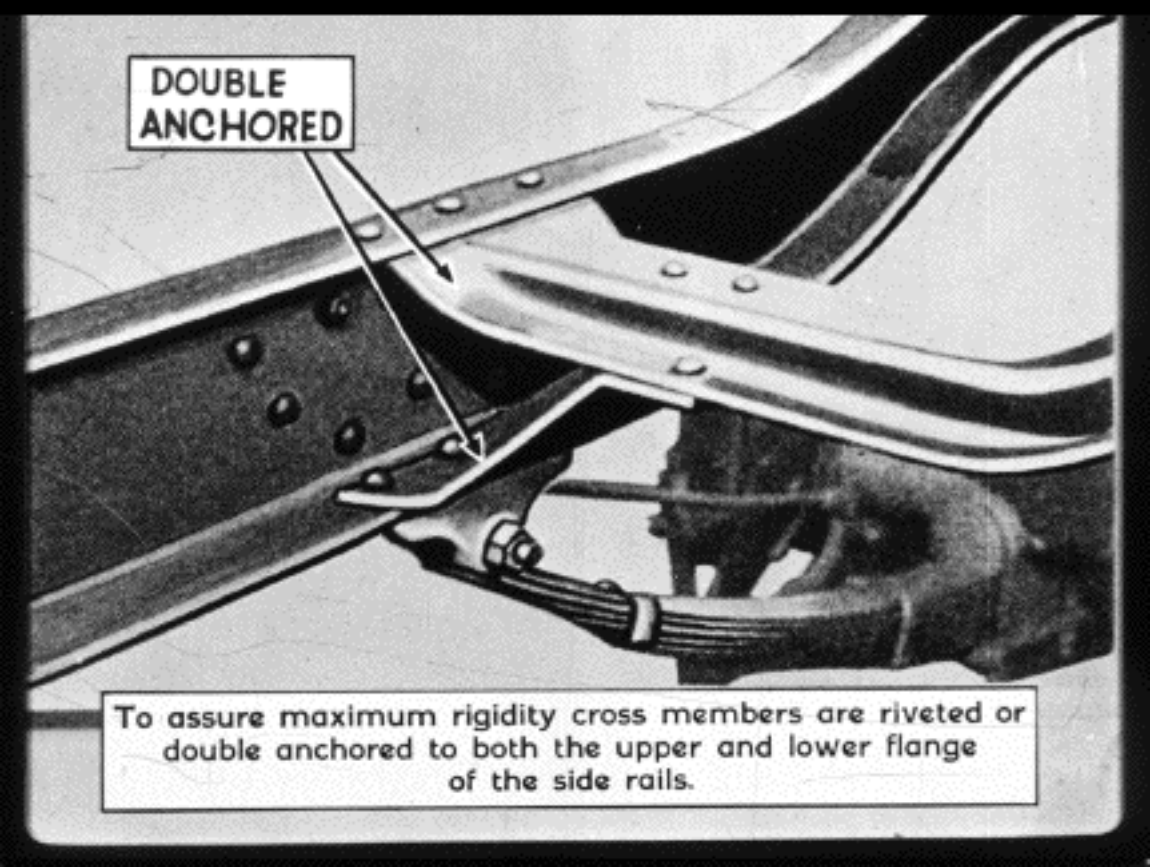


Starting with the advanced construction of the frame, let us show you on what kind of a foundation this car has been built.

A sturdy frame is essential when strength and durability are required. The side rails of this chassis are pressed steel - - they are tied by seven cross beams, two of which are tubular.



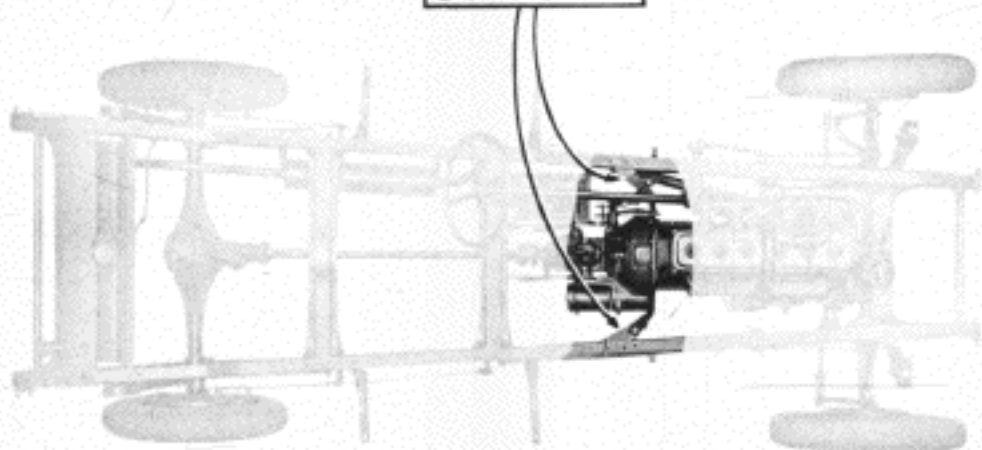
7 RUGGED CROSSBEAMS



**DOUBLE
ANCHORED**

To assure maximum rigidity cross members are riveted or double anchored to both the upper and lower flange of the side rails.

ANGULAR ENGINE SUPPORTS

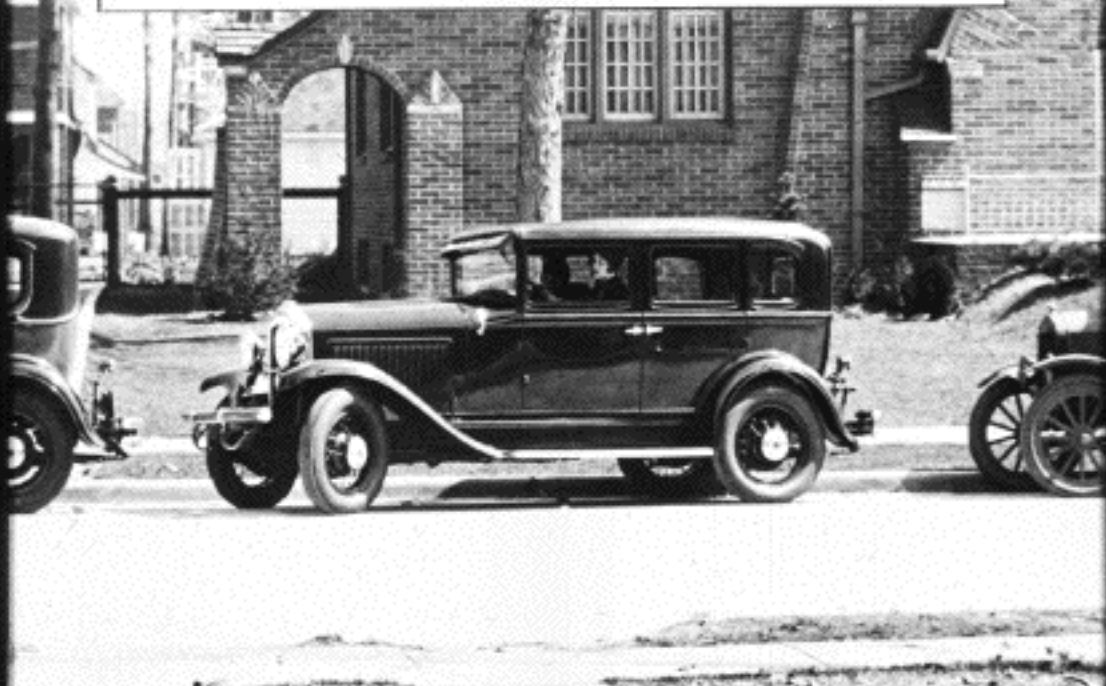


These heavy angular engine supports afford an added measure of strength and are constructed so as to absorb even the slightest vibration.



The New WILLYS-KNIGHT SIX has a wheelbase of 112½ inches - - sufficiently long to provide easy riding and especially desirable for driving in modern traffic.

As an illustration of handling ease made possible by the New STYLE WILLYS-KNIGHT SIX, it may be conveniently parked in a limited curb space.

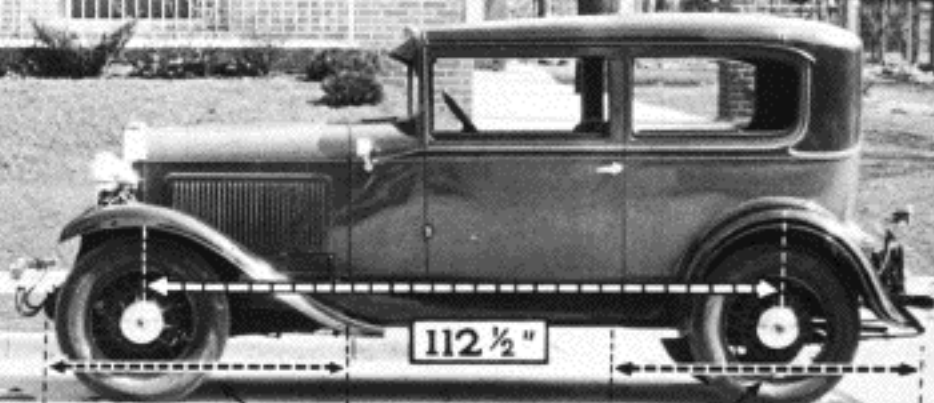


Here is further evidence of the effortless control of this new style motor car - - it may be comfortably turned in a restricted area because of its improved steering mechanism and short radius.

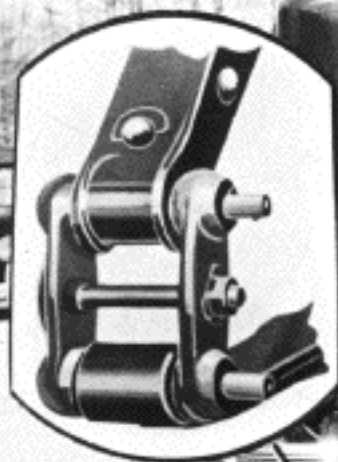


In the New STYLE WILLYS-KNIGHT SIX you are conscious of being suspended on instantly responsive springs which add materially to the car's remarkable riding qualities.

Both front and rear springs are of chrome vanadium steel - - acknowledged to be the best spring metal.
The total spring suspension is 89 inches.



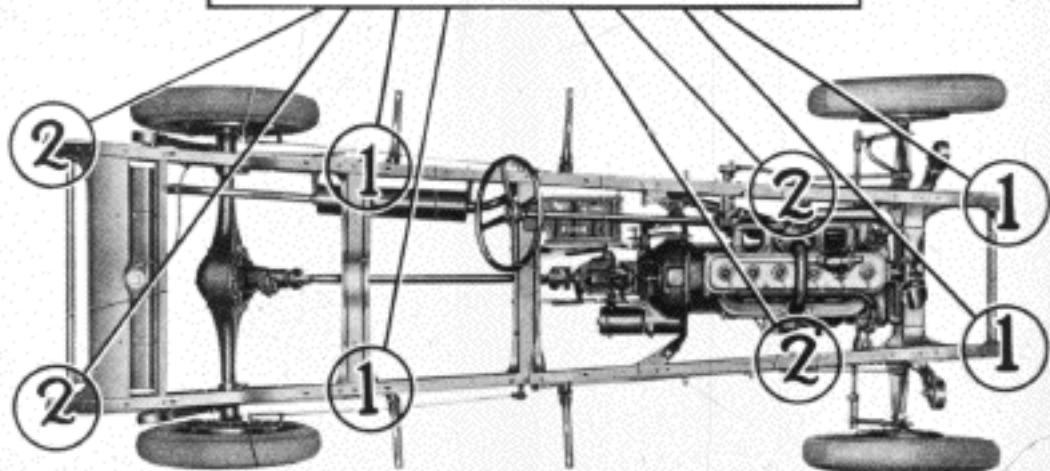
SPRING SUSPENSION 89 INCHES



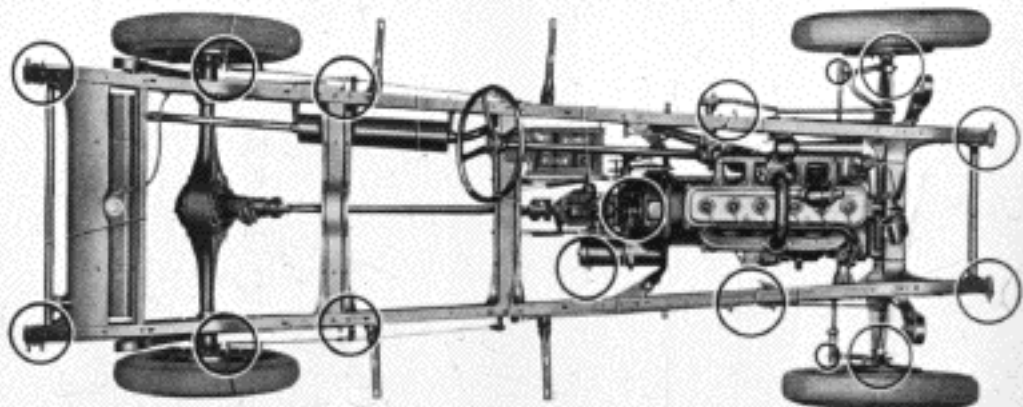
Tryon shackles - - a new and highly developed type of spring shackle - - generously contribute to the unusual riding comfort of the New STYLE WILLYS-KNIGHT SIX.

Aside from being super-sensitive to the spring action, Tryon shackles are *self-adjusting, silent, resist wear, and are self-lubricating.*

12 ANNOYANCES ELIMINATED



By reason of their self-adjusting and self-lubricating features, Tryon shackles eliminate constant attention to these twelve points - - a common annoyance and expense when shackles of less modern design are employed.



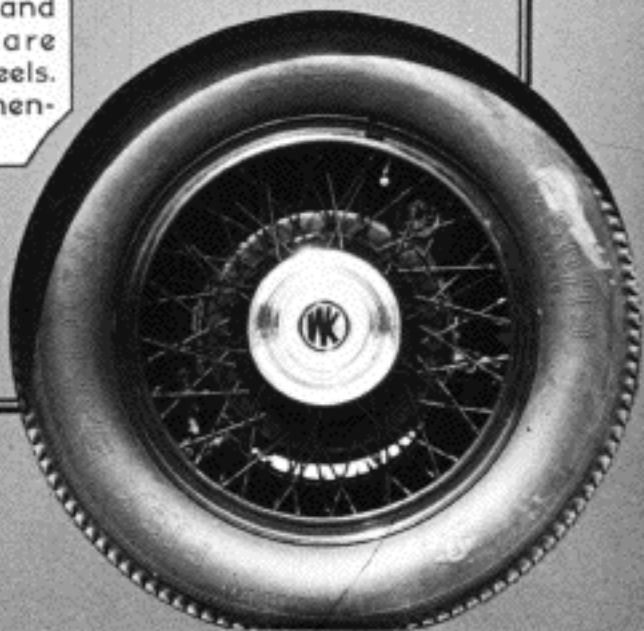
Alemite pressure lubrication to all chassis parts prevents excessive wear, prolongs the life of the car, gives silent operation and makes for greater economy. It is a positive method of lubrication.

**STABILATORS FRONT
AND REAR, ASSURING
HIGH DEGREE OF COMFORT.**

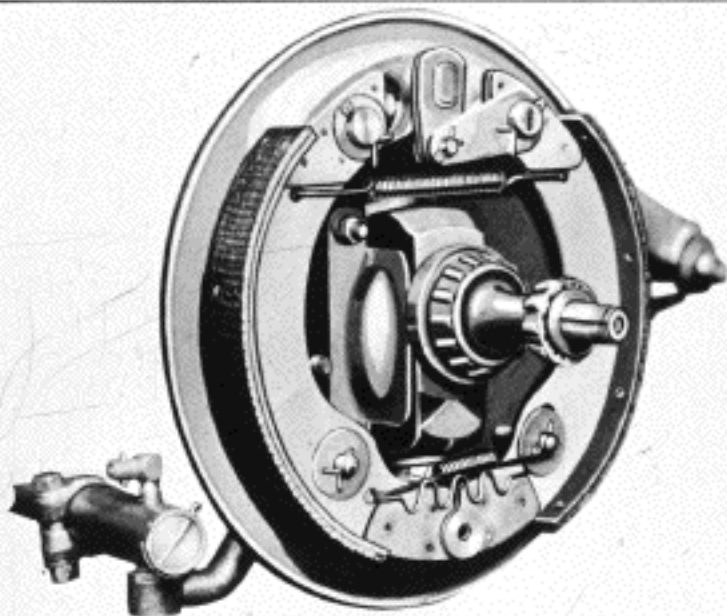


In addition to long wheelbase, long, flexible springs and easy action Tryon shackles - - all factors of riding comfort - - the New **STYLE WILLYS-KNIGHT SIX** is equipped with stabilators, front and rear.

In keeping with its smart custom built tendency the New **STYLE WILLYS-KNIGHT SIX** is mounted on wire wheels - - the vogue among finer motor cars. Smartness in design and strength in construction are two features of these wheels. Each steel spoke has tremendous tensile strength.

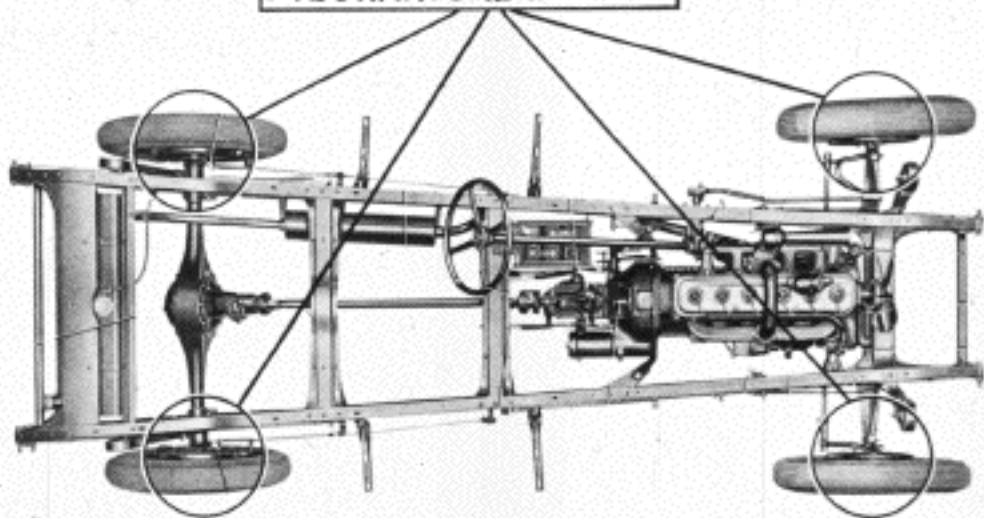


Like the world's highest priced cars, Willys-Knight wheels are equipped with Timken bearings - - famous for their long life and easy running virtues.



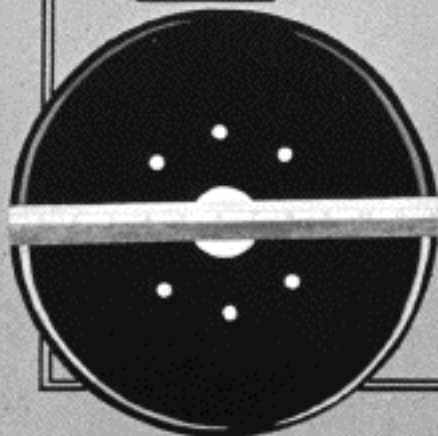
The steering gear also employs Timken bearings which, to a great degree, are responsible for effortless control and instantly responsive steering.

**UNUSUALLY LARGE
MECHANICAL BRAKES**

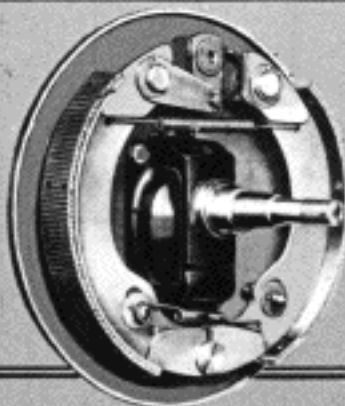


Big mechanical-type four wheel brakes, quick acting and positive, assure maximum driving safety.

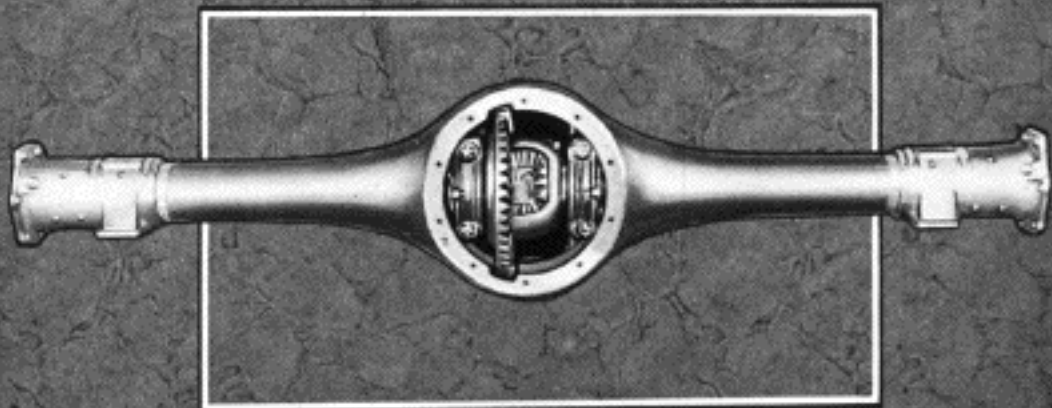
LARGER
DRUMS



WIDE BRAKING SURFACE
AND THICK BANDS



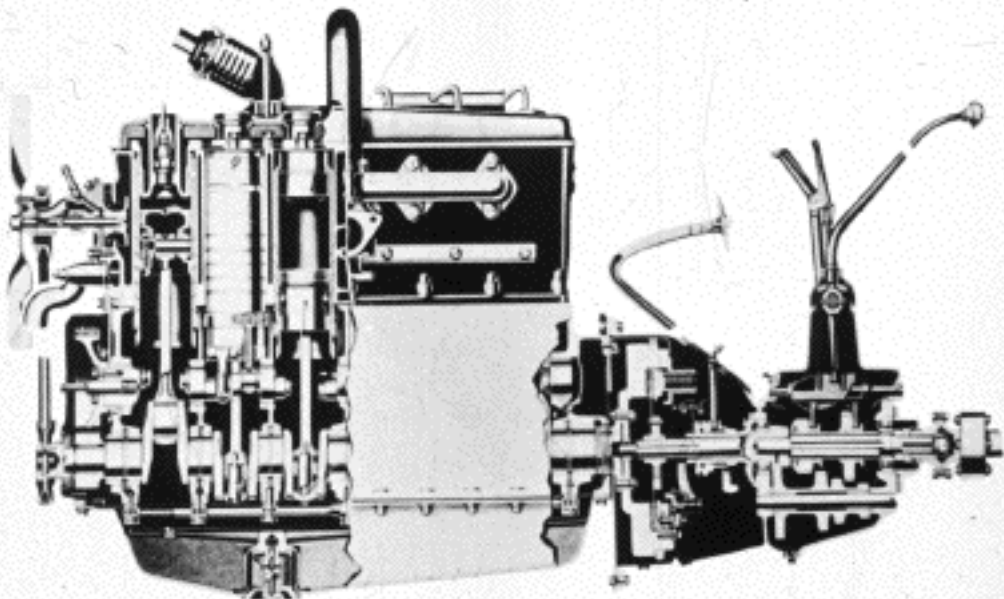
Notice the diameter of the brake drum and the unusual width and thickness of the bands. This affords a greater braking area.



The rear axle assembly, "jeweled" with Timken bearings, is one of the strongest and heaviest found in cars in or near the Willys-Knight Six's price class. It is in a pressed steel housing and has a large inspection plate giving easy access.

Now that you are familiar with the quality, strength and endurance of the New STYLE WILLYS-KNIGHT SIX chassis we invite you to inspect the engine. It is distinctive of Willys-Knight silence, power, economy and smoothness. Let it first be understood that simplicity is the key to efficiency.

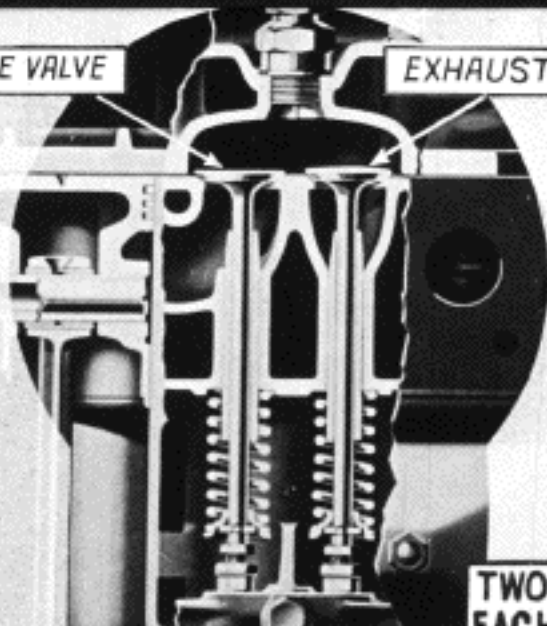
There is approximately 20 per cent less actual moving parts in the Knight engine than in the average poppet valve engine. The Knight engine is the one automobile engine employing only quiet mechanism. Every action is rotary, sliding or eccentric.



This cutaway view of the patented Willys-Knight engine reveals simplicity of design, the highly developed and scientific construction of the dome-shaped cylinder head and the ruggedness of all internal parts.

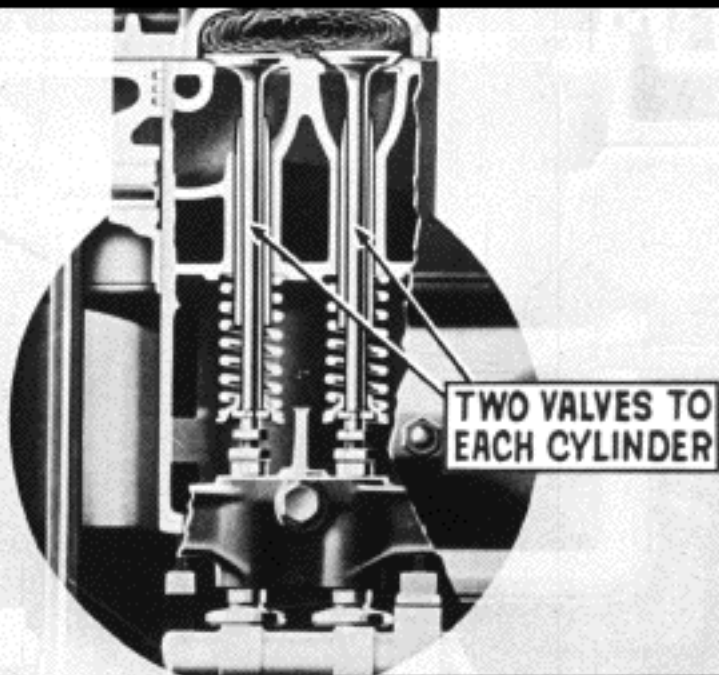
INTAKE VALVE

EXHAUST VALVE

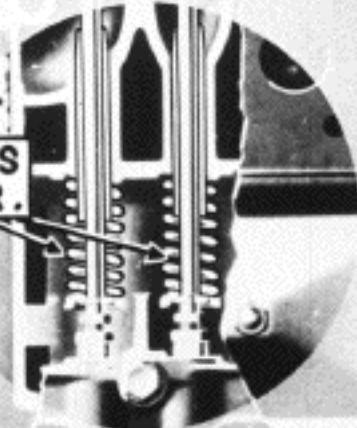


TWO VALVES TO
EACH CYLINDER

In other engines the admission of fuel vapors and the exhausting of burned gases is facilitated by poppet valves as shown here.



Each cylinder requires two poppet valves, an intake and an exhaust valve. Multiply the number of cylinders by two and you have eight, twelve or sixteen such valves.



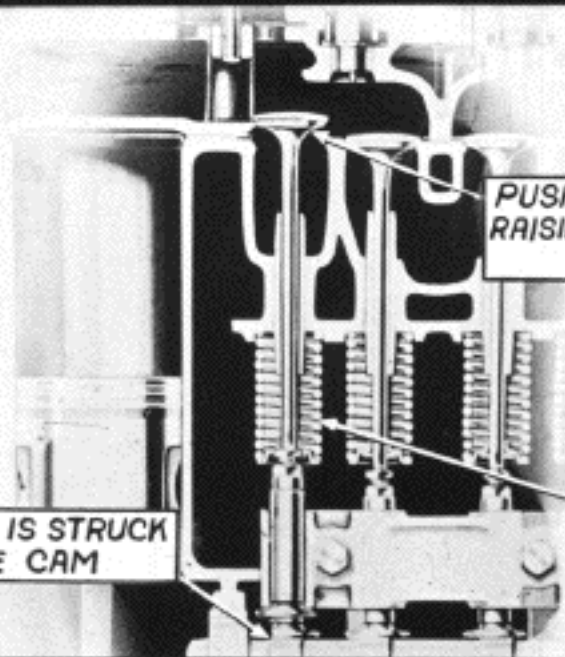
**TWO VALVE SPRINGS
TO EACH CYLINDER.**

Each valve is dependent on a spring for closing. So you find two springs to each cylinder. You can begin to see the complications of this valve principal.

Every valve is equipped with a push rod which, when struck by a cam, raises the valve against the resistance of the spring. There are two push rods to each cylinder. This principal is indeed involved.



**TWO PUSH RODS TO
EACH CYLINDER**

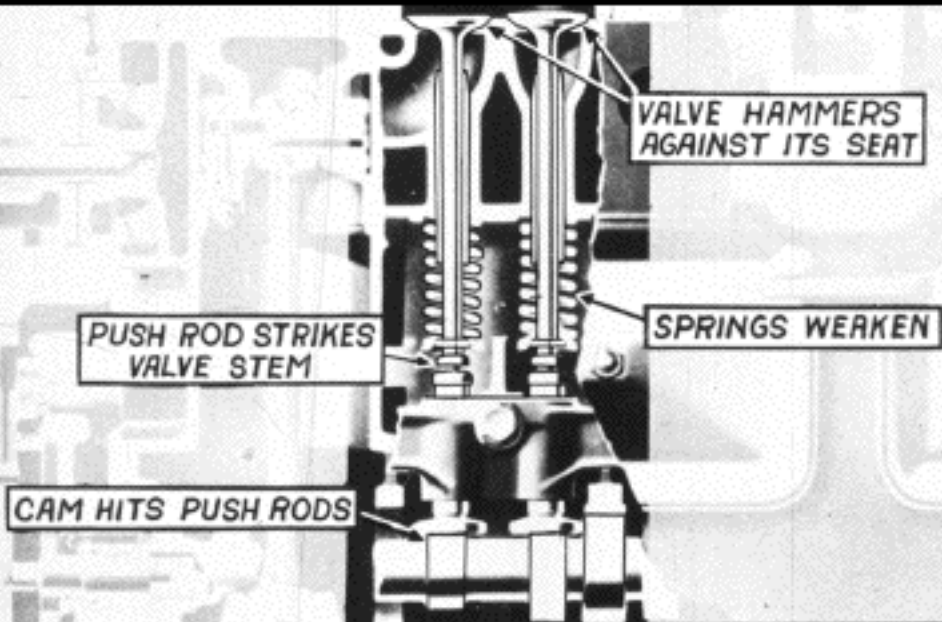


PUSH ROD IS STRUCK
BY THE CAM

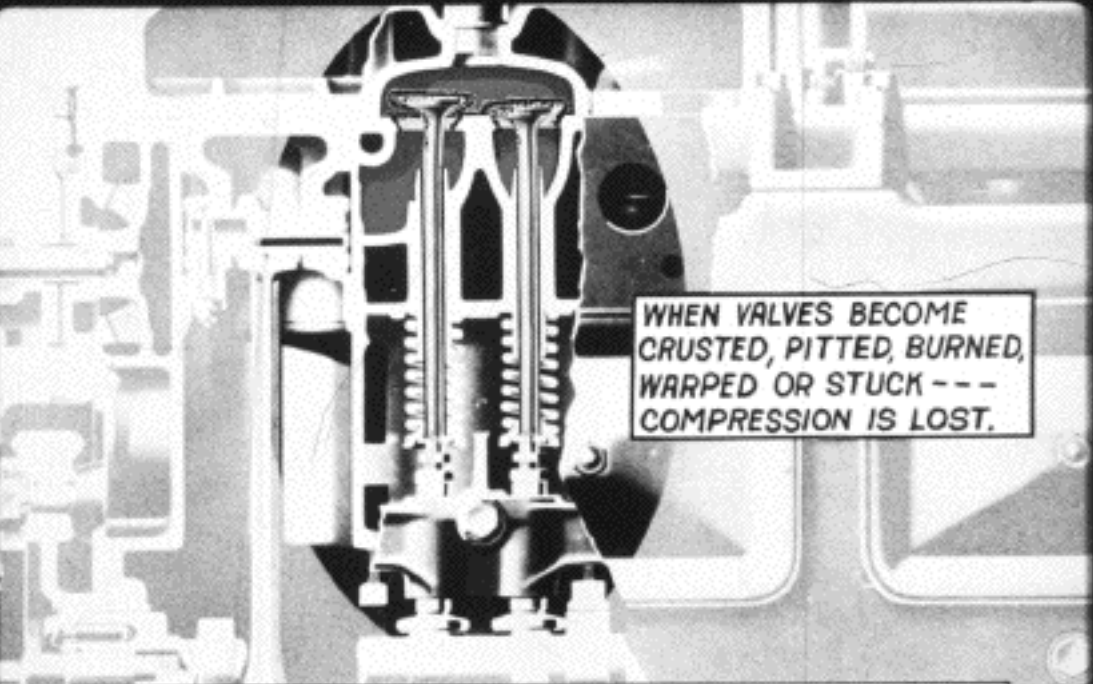
PUSH ROD LIFTS VALVE
RAISING IT FROM ITS
SEAT.

SPRINGS
RESET
VALVES

Here is the poppet valve action. A cam strikes the push rod. The push rod hits the valve stem and lifts the valve from its seat admitting or scavenging gases. The spring then closes the valve.

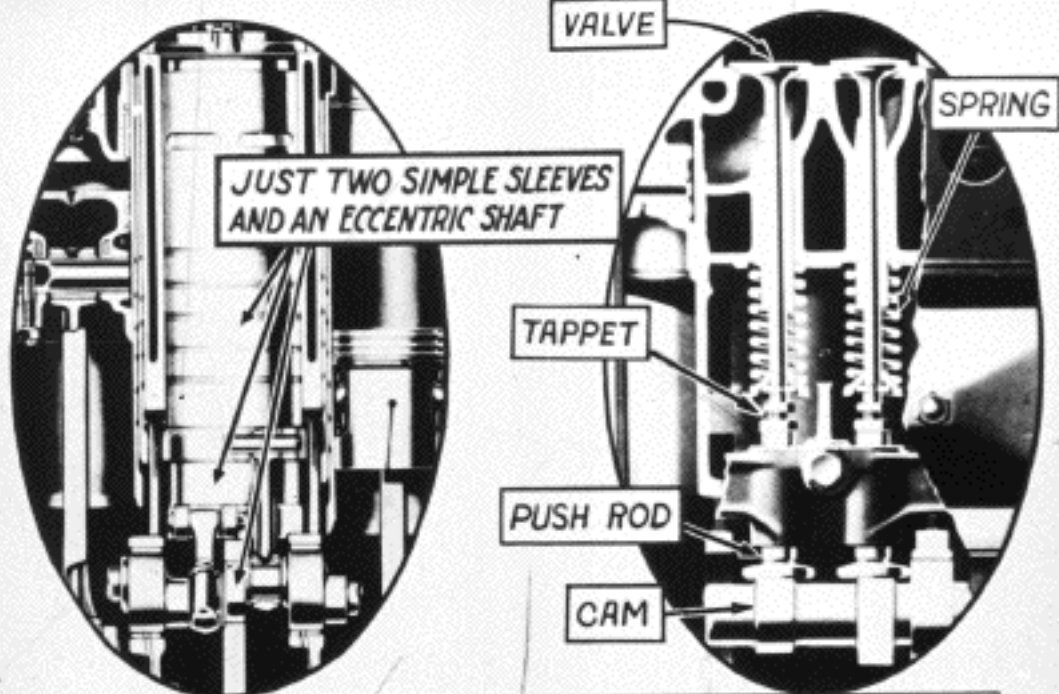


These are some of the inefficiencies of poppet valves. Metal striking metal results in wear and noise. The cam hits the push rod; the push rod in turn strikes the valve stem; the reseating valve slams against its seat; the springs grow weak.



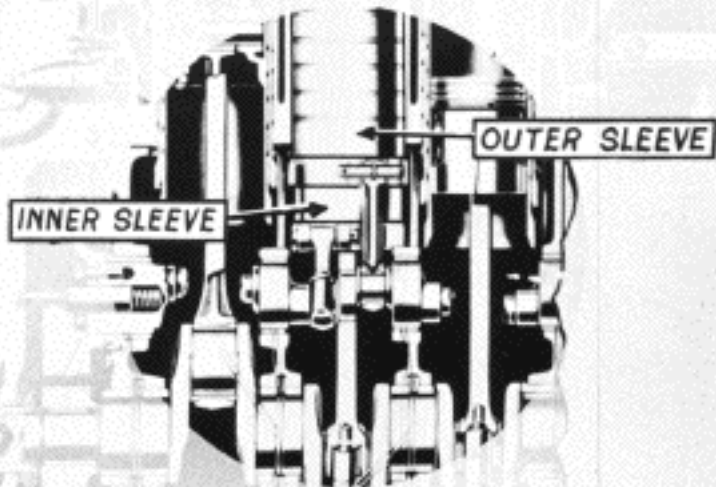
WHEN VALVES BECOME
CRUSTED, PITTED, BURNED,
WARPED OR STUCK ---
COMPRESSION IS LOST.

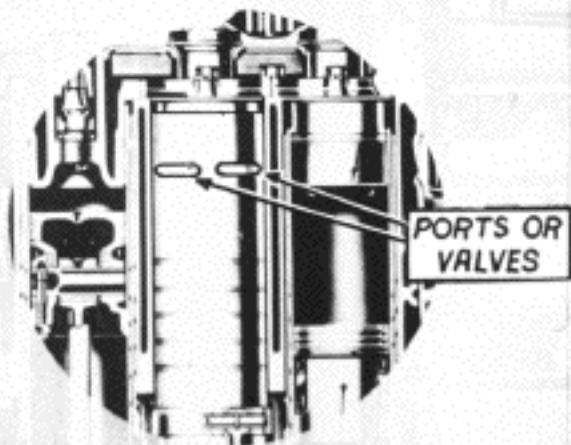
Another costly inefficiency is this: The valve must seal its opening if high compression is attained. Subjected to intense heat poppet valves become burned stuck, warped or pitted -- power, fuel and compression losses resulting.



Note the contrasting simplicity of the Willys-Knight sleeve valve principle. No springs to weaken, no clattering valves, no tapping push rods and no bumping cams.

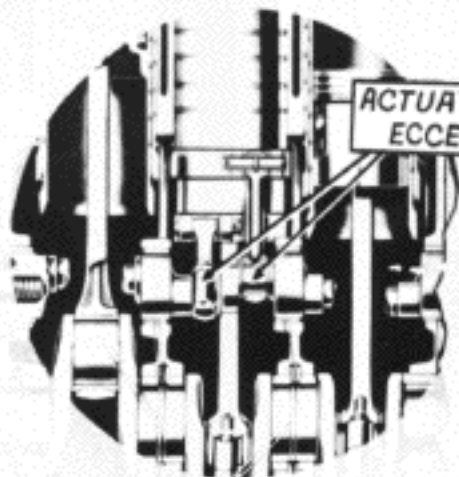
The simplicity of the Knight engine lies largely in its valve principle - - just two simple cylindrical shaped sleeves, one closely fitted within the other.





Two slots or ports are cut in each sleeve, one an intake port and the other an exhaust port.

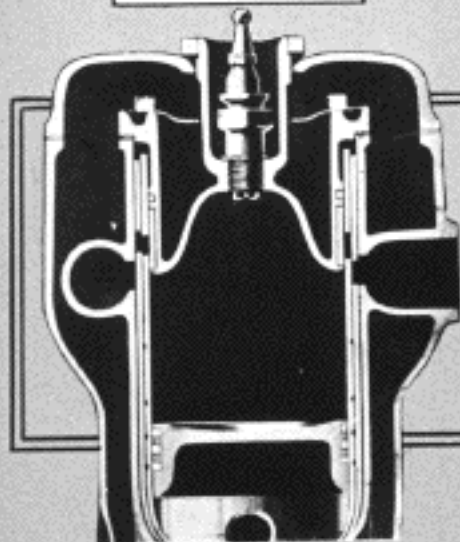
These sleeves are actuated by rods connected to an eccentric shaft. As the sleeves slide silently up and down the ports open and close affording unobstructed passage of gases.



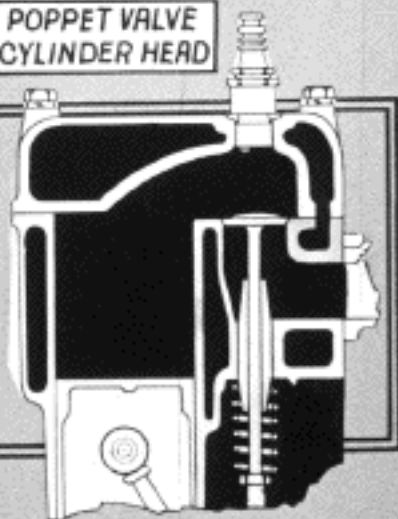
ACTUATING RODS TO
ECCENTRIC SHAFT

There is no clashing of metal against metal. No intricate springs, push rods, or other noise producing mechanism. Every action of the Knight engine is sliding or rotary. All reciprocating parts are in a protective film of oil.

KNIGHT ENGINE
CYLINDER HEAD

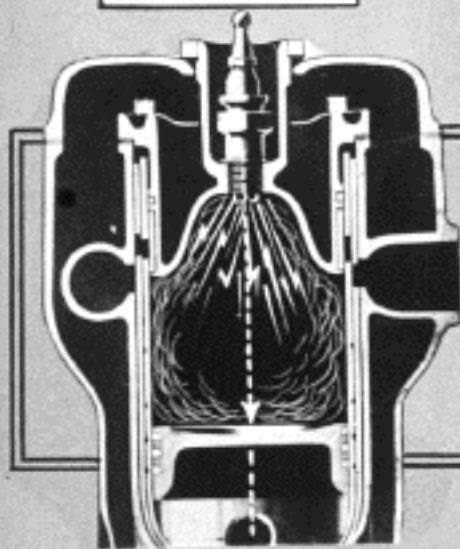


POPPET VALVE
CYLINDER HEAD

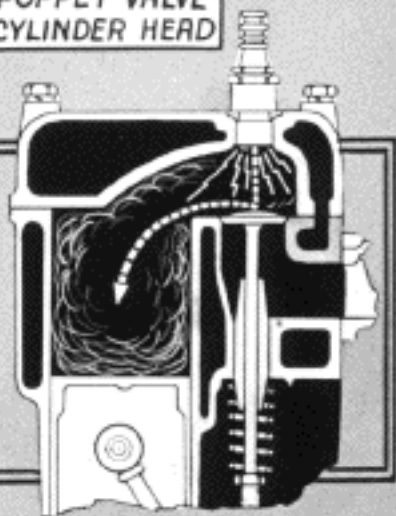


Note also the more scientifically designed cylinder head employed by the Knight engine.

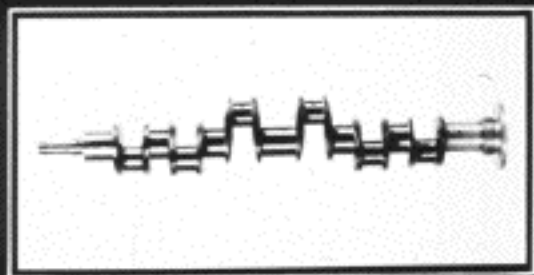
**KNIGHT ENGINE
CYLINDER HEAD**



**POPPET VALVE
CYLINDER HEAD**



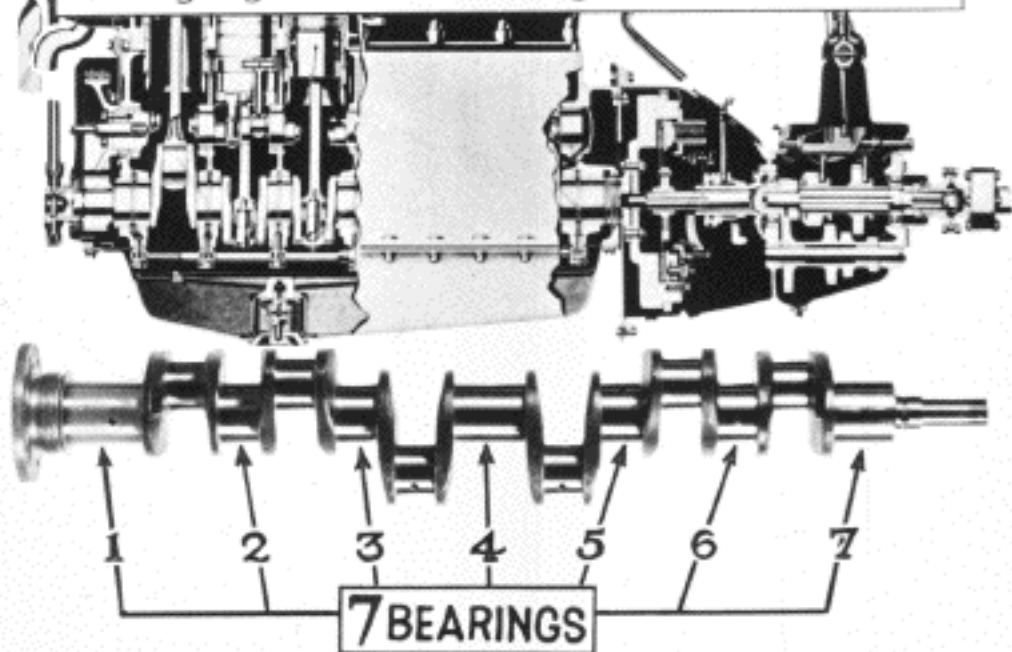
The explosion is distributed evenly over the piston by reason of the centered position of the spark plug and the spherical shaped cylinder head of the Knight engine. Half the force of explosion is dissipated on the valve in the ordinary poppet valve engine because of the position of the spark plug.



The crankshaft in the New Style Willys-Knight Six is unusually heavy. It is drop forged for strength and is heat treated for hardness.



Seven large main bearings give adequate support to the crankshaft resulting in a high degree of smoothness - - assuring alignment and increasing to the life of the engine.

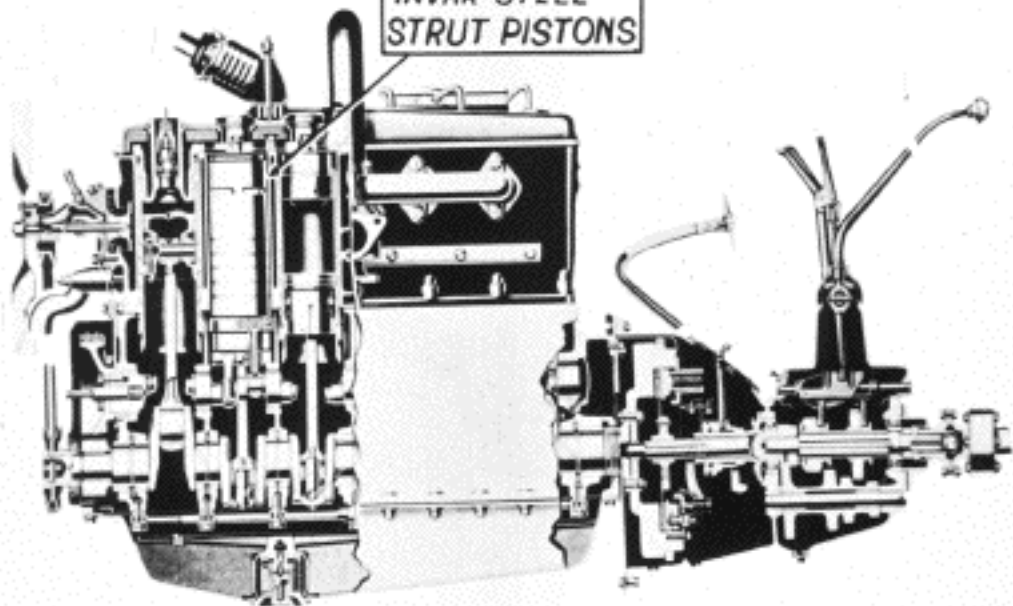


**HIGH PRESSURE
OIL PASSAGES**



As in the highest priced cars the New Style Willys-Knight Six crankshaft is drilled for high pressure lubrication to all main and connecting rod bearings.

**INVAR STEEL
STRUT PISTONS**



Invar steel strut pistons add to the inherent high compression virtues of the Willys-Knight engine. They facilitate surging power and vigorous activity.

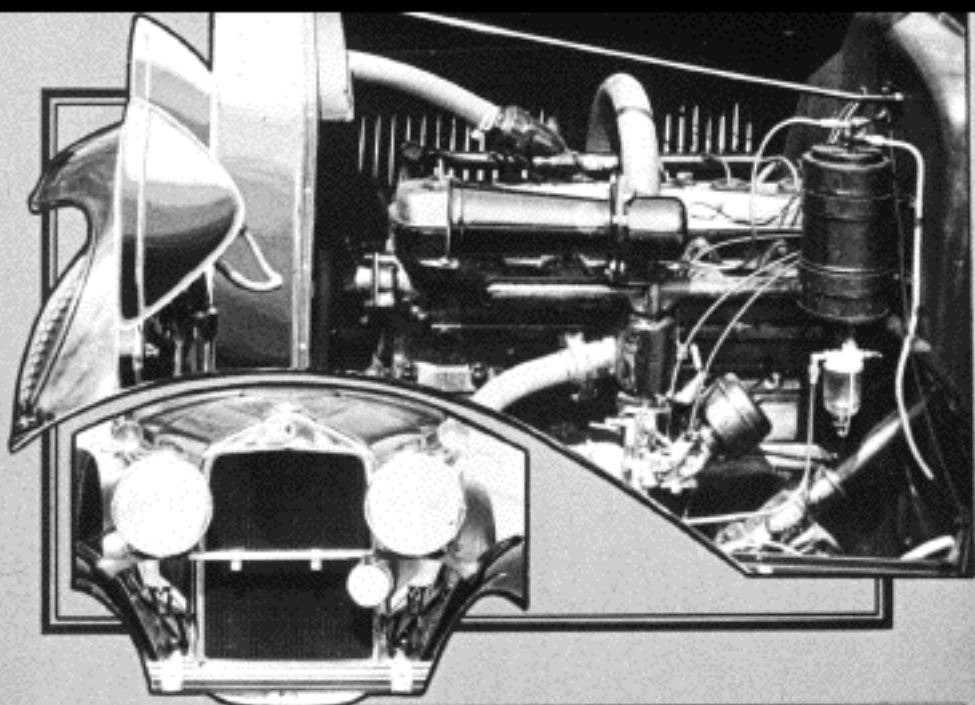
ORDINARY
PISTON



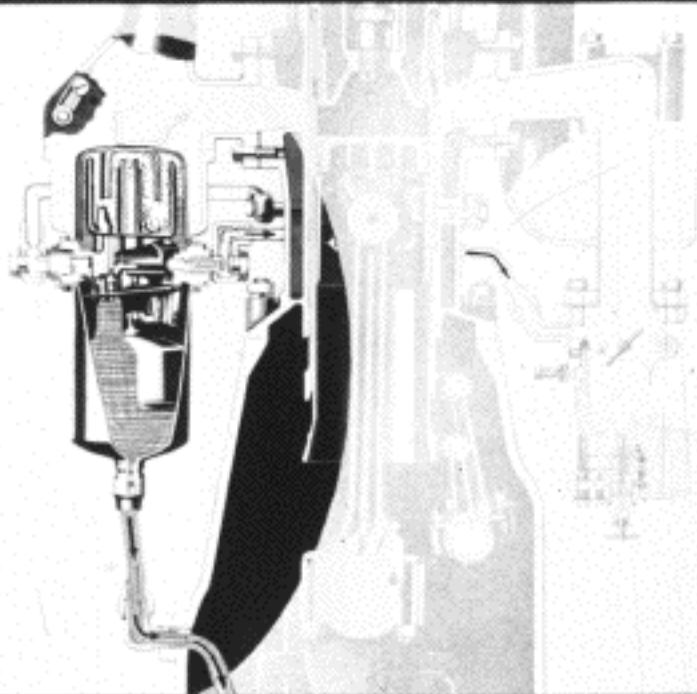
INVAR STEEL
STRUT PISTON



Ordinary metal expands when heated. A tolerance for expansion is often made in the initial fit of the pistons. Willys-Knight pistons are invariable to heat, thus a permanent close fit is accomplished. This results in greater power, greater acceleration, greater economy and higher compression.



The ample radiating surface assists in a cool, "sweet" running engine. Water is forced through the vast cooling system by a pump which is actuated by the fan belt.



Positive protection against oil dilution is afforded by the Willys-Knight oil rectifier. All liquid impurities are automatically distilled from the oil. This is responsible for the infrequent oil changes for which the Willys-Knight is famous.

The mechanical specifications we have visualized for your enlightenment and the many others which space has forced us to omit, are positive proof of the dollar for dollar value which thousands of discriminating buyers have instantly recognized.

We will gladly demonstrate the NEW STYLE WILLYS-KNIGHT SIX so you can put it through your favorite paces and experience the thrill of its smooth, silent, surging power and its luxurious splendor and comfort.





The End

To rewind, start at this end, dull side
out, holding film by the edges. Be sure
to keep fingers off dull side of film.

WILDING PICTURE PRODUCTIONS
INC.

1358 ~ Mullett St.
DETROIT ----- MICH.