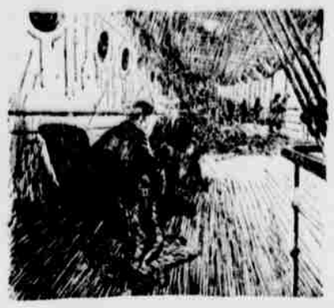


John N. Willys meets Chas. Y. Knight on board ship en voyage for Egypt. Mr. Knight at once began to talk hobby. And Willys being a natural-born listener, lent a willing ear.

"Tell me in brief," said he, "what you claim for your motor."

"All other motors deteriorate with use." "Naturally," said Mr. Willys.

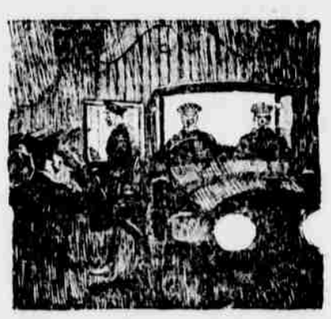
"My sleeve-valve motor improves with use," said Mr. Knight. "It always runs and runs smoothly. That's my chief claim."

Mr. Willys was so impressed that he decided to investigate thoroughly the claims of Mr. Knight, and the result is shown in the picture below.

Here is seen the Daimler-Knight, England's best automobile, which Mr. Willys rented for the purpose of determining the stamina and dependability of the Knight Motor. From early in the morning until late at night the car was given the hardest, the most grueling test to which any motor car could be subjected. All good roads were avoided.

For days this mad dash through England by a typical American was kept up. At the end of the trip Mr. John N. Willys was convinced that all claims for the Knight motors were true. It did improve with use and was stamina itself.

This trip laid the foundation for the Willys-Knight Automobile which shortly afterwards was introduced in the United States.



The Knight motor having been adopted by the Daimler Automobile Works, the builders of the finest automobiles in England, it was not surprising when King George of England commanded that a Daimler-Knight car be built for him, and the experts whose business it was to look after his interests saw to it that his Majesty had not been deceived by the representations of enthusiasts. The "Silent Knight" had been subjected to the most rigid tests and came out victorious, else it never would have been recommended for his Majesty's adoption. King George is here seen leaving his Daimler-Knight limousine.

Here is seen one of the Willys-Knight stages that runs on railroad schedule between Colorado Springs and Cripple Creek, making two round trips daily, regardless of weather. The original seven-passenger bodies have been altered so as to permit the carrying of 10 passengers, together with their baggage, as well as newspapers and express, up to 300 pounds.

Stage No. 4 has run 97,000 miles at a mechanical cost of $149.80.

Stage No. 7 has run 30,000 miles without one cent of expense to the motor. Twelve other make cars fell down completely on this job. Is it any wonder that Leo M. Wright, the stage line manager, is a Knight enthusiast?

Willys Knight

"Improves With Use"

The accompanying illustrations suggest some of the great feats that have been accomplished through the use of the Knight Motor. It is with the realization that a large number of people in the United States are not familiar with the achievements, the advantages and the possibilities of this wonderful motor, that we are citing 10 exclusive and concrete reasons why it is superior to all others. Read these reasons listed below and then ask any good mechanic, who is not interested in the sale of some other car, if they are not irrefutable facts.

Reason No. 1

Improves with use. Carbon is positively beneficial to the Knight motor, while in every other type of motor it is a great detriment and is becoming more so each day as gasoline gets poorer. Carbon seals the combustion chamber in the Knight motor instead of depositing on the valves and valve-seats, and unseating it as in other types of motors. Therefore the very thing that tears down the performance of other motors, builds up the performance of the Knight motor. Hence, the Knight motor improves with use. This is not theory, but a fact, proven beyond contradiction, by the performance of this motor in some of the best automobiles in the world for the past 12 years.

Reason No. 2

Does away with about 120 small working parts which are friction producing, and are always requiring frequent adjustment and replacement. Friction causes a vast waste of power, to say nothing of the wear to parts affected, and the noise produced therefrom. You will note that there are no springs push rods, push rod guides, tappets, tappet adjusting nuts, valves, valve stems, and numerous other small parts that are so necessary to the the poppet valve motors, and which give endless trouble. Were any of these small parts to break or warp they would cripple the motor on which they were installed. The Knight motor employs two sleeves and two connecting rods to do the work of all these small parts, the action of which is positive, and reduces trouble to a minimum. In a poppet valve motor you have to depend upon springs to close the valves and the action of the cam shaft to open them, which is anything but positive.

Reason No. 3

Does away with valve grinding and all valve trouble, which constitutes about 60% of the trouble experienced in all good poppet valve motors. Experiments have proven that in order to keep a poppet valve motor at its highest efficiency, the valves therein must be ground about every 1,000 miles. We can prove that the Knight motor will show anywhere from 5% to 10% more power even after 20,000 miles. A large number of working parts used in connection with the valves are also eliminated, and which are friction producing. Friction is an absolute waste of power, to say nothing of the wear to the parts affected and the noise produced therefrom. The Knight motor is quiet and remains so, for the reason that there are no clashing parts or small parts to wear and become loose and thereby noisy.

Reason No. 4

It has the ideal, or spherical, combustion chamber. Engineers have been striving for years to perfect this type combustion chamber for the poppet valve motors, but are unable to do so on account of having to provide space for pockets for valves to operate in, or else putting the valves in the head of the motor where the spark plug should be, and drilling a hole in the side of the block for the spark plugs. Spark plugs in the latter position are easily fouled for the reason that any excessive oil that gets by the pistons on account of bad rings or otherwise is thrown directly on them by reason of their close proximity. The pockets used for housing the valves harbor dead gas that produces carbon which only adds to their already troublesome supply. You will note that there are no pockets in this motor and that the exhaust or intake hole when the sleeves register is at least 10 times the size of the exhaust or intake space under the ordinary valve when lifted, and is unobstructed in any way. The valve head in a poppet valve motor is an obstruction to its own exhaust or intake, because the exhaust or intake matter first hits the head of the valve and is then forced through the opening under it. The spherical combustion chamber also permits igniting the charge in the center so it burns in all directions alike. In the poppet valve motor it is ignited on one side and naturally gives uneven expansion, which results in a large loss of power.

Reason No. 5

Has a perfect cooling system. By this we do not mean that it simply keeps the motor from overheating, but that it is so constructed that the expansion in the motor when hot is uniform. This is not so in a poppet valve cast en bloc motor for the reason that it is impossible to get a uniform thickness on all sides of the walls in such a casting, with the result that when hot their expansion is anything but uniform. This uneven expansion causes excessive wear to pistons and cylinder walls and results in what is known as an egg-shaped or lop-sided cylinder, and as you well know it is impossible for a perfectly round piston to move up and down in such a cylinder without doing some damage sooner or later.

Reason No. 6

Has positive valve action. You will note that the sleeves, which take the place of valves in this motor, are operated by two connecting rods which work off of an eccentric shaft thereby making their action positive at any speed of the motor.

Reason No. 7

Does away with noise. There being no clashing parts in the Knight motor, naturally there is nothing to make noise. And every mile that you drive it the quieter it will become, because here again carbon is beneficial to the Knight motor. It will deposit on the sleeves, filling up the low spots and depressions therein, also giving them a glass-like finish which practically eliminates even the chafing sound produced by metal rubbing against metal.

Reason No. 8

You will note that the spark plugs in the Knight motor are completely water-jacketed, which greatly prolongs their life and prevents points from warping, which either closes the gap or widens it to such an extent that plugs will not function.

Reason No. 9

Has throttle controlled oiling system which supplies oil in the quantity needed for the speed of the motor. In this way there is no surplus oil to reach the combustion chamber and thereby wasted. And, instead of splashing the oil on the bearings it is pumped through a hollow crankshaft and flows on which makes lubrication more positive and prevents breaking up the oil which destroys its lubricating value.

Reason No. 10

Every detail of chassis and body are in keeping with this wonderful motor.

No doubt you have seen the big double-deck busses on Fifth avenue, but did you know they were Knight motored? Colonel Green, manager of the New York Transportation Co., which operates these busses, says: "Exhaustive tests have proven that we can operate the Knight motor at one-fourth less fuel cost than any other motor. It is the motor that always runs and actually improves with use up to 20,000 miles, and after that continues in its perfection to an age the limit of which has not yet been reached." Colonel Green was head of the English tank service, which also used Knight motors, and is therefore, qualified to speak with authority.

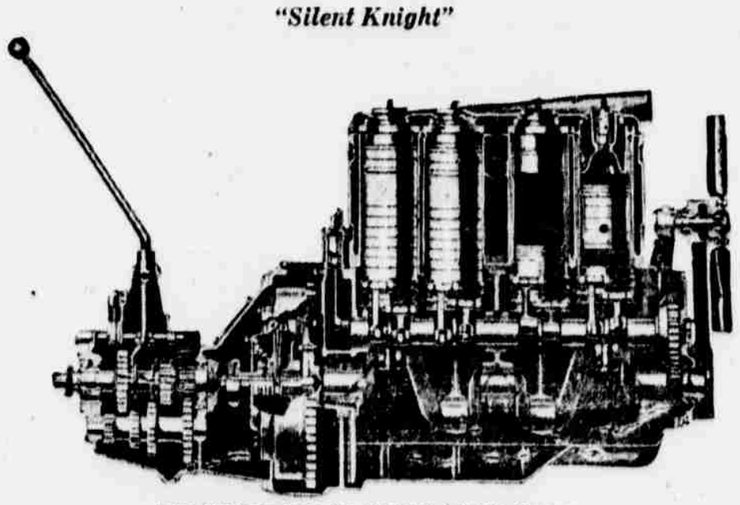
Here is seen a tank in action which is Knight motored. Knight motors were selected for the tanks because these same motors had demonstrated to the English army engineers that in the London busses they could be depended on. After the great tryout at Cambrai, no further proof of Knight power and dependability was necessary. Big tanks and whippets, Knight equipped, were turned out as rapidly as possible and sent to the front. Just another proof positive of Knight superiority.

Here is seen a Belgian "mile-a-minute" armored car used during the war for scouting and patrol duty and these cars, together with hundreds of officers' high-powered cars, usually driven at terrific speed over roads that were roads in name only—were able to do their part because of the never-failing Knight sleeve-valve motor.

"Silent Knight"

"The Motor That Improves With Use"

You can see cut-away model of this wonderful motor at our salesroom, and which make its advantages apparent at a glance.



"The Motor That Thrives on Carbon"

To investigate is to be convinced. Do you want to be convinced? If so, come to our salesroom. We will be glad to demonstrate.

THE WILLYS-KNIGHT SLEEVE-VALVE MOTOR

Carhart-Murphy-French Co.

607 South Boulder Phone Osage 5550

Here is seen the Willys-Knight of today with all the improvements to the Knight motor that were brought about by its war experience. In the tanks this motor proved itself supreme and was adopted by the English for this job exclusively. It also established an equally good record in the Belgian "mile-a-minute" cars used for scouting. Every detail of body and chassis are in keeping with this wonderful motor.