

EFFICIENT SPRINGS NEEDED ON CARS, INSISTS ENGINEER

By ISRAEL KLEIN
(NEA Service writer)

If we had efficient springs on our automobiles, there would be no need for balloon tires or shock absorbers.

These, says C. C. Hanch, noted automotive leader, are merely accessories to this fundamental part of automobile design—spring suspension.

They are useful today because of the failure of springs to do what they are supposed to do.

This failure is caused by two factors—first, improper design from the manufacturing standpoint; second, improper care from the motorists' viewpoint.

The basic principle for proper spring suspension, says Hanch, lies in the transference of the energy of motion into the energy of heat, to be dissipated by radiation. This is accomplished by friction, such as takes place between the leaves of the springs.

Friction Is Bad

"Yet," Hanch comments, "it is a common occurrence to see people lubricate the friction out of their springs and then put it back in by spending money for shock absorbers, which operate on the friction principle."

The reason why springs are greased with graphite is to keep them from "grabbing" due to the presence of dust and grit. Friction is what takes up the energy transferred to the car when it rolls over a bump. It is as essential in stopping the car from bobbing up and down as is friction in the brakes from stopping the car horizontally.

Proper Design

Properly designed springs, according to Hanch, are set over an axle, so that the part to the rear of the axle is longer than that to the front. The rear sections of the springs over the front axle are different in length from those of spring over the rear axle, he points out, so that "loping" may be prevented.

"The acid test of the spring suspension of any car," he continues, "is in its riding qualities without the aid of any hypodermic injection in the way of shock absorbers, tires of excessive section, and so on."

TELEPHONE LINES AID MAIL PLANES

The route adopted by the air mail fliers between New York and San Francisco closely parallels that of the Transcontinental telephone line which this year is celebrating its opening to the public. In fact, with the exception of Pennsylvania, where the aviators fly north of the line; Colorado, where the telephone line veers to Denver while the fliers continue due west; and one part of Nevada, where the line curves north to Winnemucca, the two routes are practically identical.

Fliers Short-cut

From coast to coast the Transcontinental telephone lines cover a distance of 3,650 miles. The route of the air mail fliers is about 2,080 miles, the difference being due to the short cuts which the fliers are able to take between points. There are fifteen stops on the aerial mail service route and only one of these, that at Bellefonte, Pa., the first stop west of New York is not on the telephone line which spans the continent.

Swift as are these air mail planes, winging their way across an entire continent in less than a day and a half, the telephone, with its instantaneous service, can be relied upon to overtake any one of them in its flight and deliver some important message at the next stop. Indeed, the Transcontinental telephone line plays an important role in the success of the air service. If there is any delay in the schedule westward, it is reported from Reno by wire to the landing fields in the Golden Gate, so that the mail authorities know exactly when the big planes will arrive with their mail cargoes.

Given Weather Advance

Similarly, fliers leaving San Francisco in the early morning on their westward trip are informed in advance of the kind of weather that is awaiting them when they cross the Sierras two hours later and what to expect during an all day flight across deserts and mountains until they reach Cheyenne at nightfall on the eastern slope of the Rockies and at the beginning of the great western plains.

The development of the transcontinental mail service is of especial interest to the telephone industry in that one of the men who was actively engaged in the perfection of the railway mail service was Theodore N. Vail. In 1878, after the run of the Central special 100-hour mail train to San Francisco and the establishment of a general standard of fast and reliable railroad mail service, he left the post office department and devoted most of his succeeding years to making neighbors of 100,000,000 people.

Motorists Quick

On Brake Action

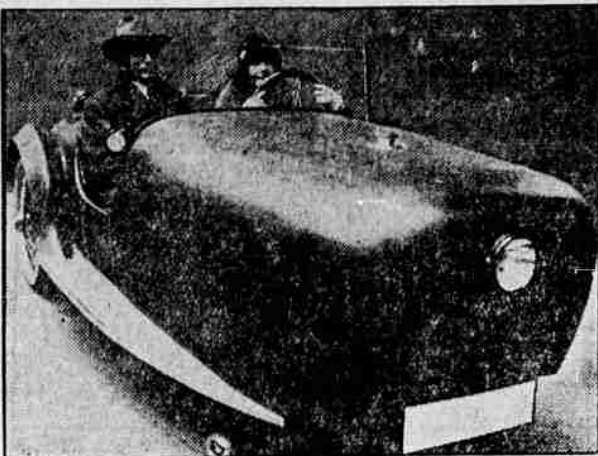
(By NEA Service)

WASHINGTON, March 28.—(Special)—A test within half a second to check driving commands, is the finding by F. A. Moss and H. H. Allen, bureau of standards engineers.

This conclusion is the result of tests made among numerous drivers, on their speed in replying to the command to stop their cars. The average difference in time between the command and the complying action when the brake pedal is applied, the engineers found, was half a second.

The reaction time was not appreciably affected by the speed of the vehicle, nor was there any appreciable relation between the reaction time and the age or sex of the individual. But the experimenters discovered that there was a marked relation between the reaction time and the intelligence of the driver.

Here's a Foreign Freak That Attracts



Europe also exalts in the freakishness of its designs. The auto pictured here is an example. Even the front wheels are enclosed under the hood. It's only a freak, however, because it couldn't be very efficient when bucking a wind at any considerable speed.

Ease in Driving is Aim of Chevrolet

Smooth motor car operation is one of the most desirable qualities in any automobile today because of the extensive and constant use to which the average car is put on both short and long trips.

The thousands who have purchased the new Chevrolet report that the driving of this car requires little physical effort, due in great measure to the perfected single plate disc clutch.

This new type clutch not only starts the car smoothly and operates with only a light pedal pressure, but has such large contact surface that it delivers all the power all the time. It requires no lubrication.

While the new type clutch is one of the most obvious of the mechanical features, it is only one of the many features that make for easier driving qualities, more sturdy chassis and more economical operation.

To improve the riding qualities, the new Chevrolet has been equipped with new semi-elliptic springs. They are chrome vanadium steel, the rear springs being 54 inches long and the front springs 36 inches long. To lower the center of gravity and improve the roadability of the car, the rear springs have been underhung.

Both front and rear axles are new and have been greatly strengthened.

\$400,000,000 to be For Roads in South

(By NEA Service)

ATLANTA, Ga., March 28.—The south this year is going to spend \$400,000,000 for the construction and maintenance of improved highways, making this one of the greatest road building years in the south's history.

This amount is the combined expenditure planned by 16 southern states.

The greatest developments are planned for Florida, followed in order by Georgia, Alabama, Tennessee and the Carolinas.

Less Taxes in Texas

"Less taxes for Texas" is the watchword for that state this year, so far as auto owners are concerned. Governor "Ma" Ferguson has practically promised relief for them.

Better Lincoln Road

Seven million dollars were spent in 1924 for the improvement and development of the Lincoln transcontinental highway. More than 250 miles of new construction, along the 3100-mile route, were completed.

Oregon Life Insurance, D. M. John, Agent.

CAR OWNERS IN RUSSIA SCARCE

(By NEA Service)

NEW YORK, March 28.—Communist ownership of property, severe conditions of service and lack of service facilities make it practically impossible for the average inhabitant to own an automobile in Russia.

Walter M. Wolff, after observing automotive conditions in Russia, makes this report in a communication to "Automotive Industries."

"If a man wishes to purchase an automobile," he explains, "he makes application to the soviet commerce commission in Moscow or Leningrad, giving first of all his reasons for desiring to buy the motor car. If his reasons are valid and he succeeds in obtaining a permit his order is communicated to one of the Russian purchasing or trade commissions in Berlin, Rome or London."

"The soviet purchasing agencies then cast about, as unofficial trade organizations, for the most favorable opportunity to buy automobiles or other merchandise."

"But for the common man to own a motor car in Russia, as in the United States, is simply impossible."

There are about 25,000 serviceable motor cars in Russia today, with 5000 or 7000 motorcycles. These face the handicaps of unfavorable climatic conditions, rough roads, lack of good service and good mechanics. Besides, most of these cars are of the pre-war type, half worn out from service.

In addition, Wolff says, rubber is scarce and high priced, and gasoline is equally expensive.

Large Increase in Sales is Reported

Dodge Brothers remarkable increase in production and sales continues without interruption, an official statement from the factory discloses.

Actual retail deliveries by dealers during February were within a few cars of 15,000, which is an increase of 23.1 per cent over deliveries in February, 1924.

Every week in February showed a material increase over the preceding week and the first week of March likewise exceeded the last week of February.

While dealers' stocks are exceptionally low, the factory is turning out cars in such volume that it is hoped to meet practically the entire current demand. Production for the first week of March was over 1000 cars a day.

Dodge Brothers sales for 1924 increased more than 25 per cent over 1923, in the face of an 11 per cent decline in the industry as a whole. These facts, considered with the present continued increase, bespeak a most gratifying condition and Dodge Brothers are naturally optimistic.

Noted Lake Road Is Last Victim

OAKLAND, March 28.—(Special)—The latest victim of the Star car's relentless campaign being waged against famous western test hills was announced in a telegram received from Everett, Wash., announcing that the noted Lake Rossiger road, outside that city, has been climbed by both standard and sport touring models of the new Star car with the "million dollar motor."

According to available records in Washington, the Lake Rossiger road, although tried many times, has always proved a stumbling block for high gear tests, and no car, regard-

less of price or class, has ever made the grades.

Of note is the fact that at this time of the year, the road is in terrible shape from recent rains which have left deep ruts and muddy holes for practically the entire distance.

The cars were driven by Julius Dusevoir, factory engineer of the Durant Motor company of California who, with E. T. Tuller, sales manager, is touring the northwest. Dusevoir recently drove another Star car over the famous Waterman Canyon road in southern California in high gear.

According to the wire, he first tried the Lake Rossiger road with a sport touring model, and when the stunt proved successful, he went back to town, took a standard touring car off the salesroom floor of the Everett Star Motor company, and duplicated the feat. Rain was falling at the time the tests were conducted.

One-Piece Case Adds To Life of Battery

One of the most important improvements on the storage battery, since its universal adoption as the starting and lighting unit of the automobile, is the recent change from the wooden case to the all rubber container.

This one-piece case is said to eliminate many of the common battery troubles and consequently, add to the life of the storage battery. Grounds frequently occur from old battery boxes which have become saturated with the acid solution. This condition usually results from a broken jar, caused by a severe road shock, overfilling the battery, or boiling over when overcharged at a high rate.

When the container is subjected to such treatment, and the box becomes acid soaked, an electrical path is formed between the terminals of the battery through the damp box to the metal frame that holds it in place in the car. A short occurs and the battery will be ruined if the trouble is not remedied at once. Such treatment usually results in the necessity of rebuilding the battery, installing new plates and equipping it with a new case.

The rubber case eliminates all this trouble and expense as the composition used is not affected by the acid solution. Broken cells are practically dispensed with, for in place of the individual, removable cells used in the wooden base, the cells of the rubber case are part of the one-piece cast. Handles are also included in the original casting, and are heavily reinforced to prevent breaking.

These rubber cases have been used during the past year on the Wizard battery manufactured under the supervision of the Western Auto Supply company and distributed through their chain of 120 Western Stores. Although the wood encased battery may still be obtained in all sizes, Western Auto officials report that the rubber covered battery is proving to be the more popular of the two, among automobile and radio owners.

Jewett and Paige Sales Show Gain

Indications that the new Jewett six and Paige six models are in big demand throughout the nation were seen by the distribution department of the Paige-Detroit Motor Car com-

pany in early reports from some of the smaller automobile purchasing states in the union which have just reported their registrations of new cars during January, 1925.

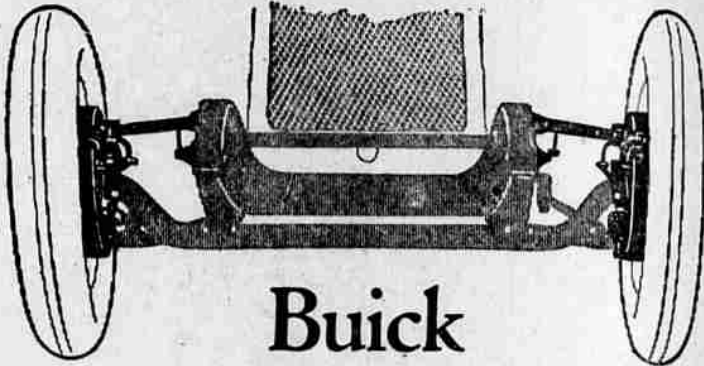
Idaho, Iowa, Maine, Vermont, West Virginia and Wyoming all reported an increased percentage of Paige and Jewett cars registered out of the total registrations of all cars during January, 1925, over January, 1924.

More Locomotives

Sweden has taken to the use of motor locomotives on its railway lines. This is a move to meet the growing competition of auto and buses.

Coast for Blows

Cut off the power and let the car coast to a stop if a tire blows out. Do not jam on the brakes or a bad skid will result.



WHY THERE ARE MORE THAN A MILLION

Buick Four-Wheel Brakes

Of the more than a million Buicks in use today, the last 350,000 built have Buick mechanical 4-wheel brakes. On these 350,000, Buick 4-wheel brakes have proved their increased control and safety by faultless operation through nearly two years, in every extreme of weather.

B. F. Goodpasture
Seventh and Olive Sts. Eugene, Oregon



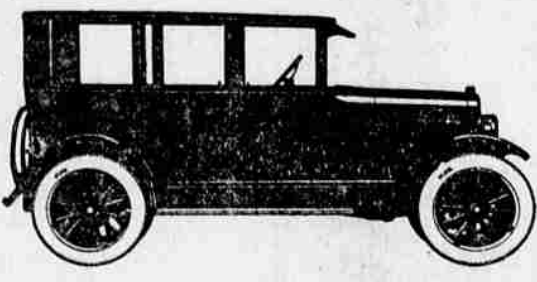
WHEN BETTER AUTOMOBILES ARE BUILT, BUICK WILL BUILD THEM



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OVERLAND ALL-STEEL SEDAN FOUR DOORS

West and Sons Motor Co.
9th and Pearl Eugene, Ore.

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