

4 WHEEL BRAKES ARE HERE TO STAY

Packard Eight First Came Out With Four Wheel Brakes in 1923

(By Col. J. G. Vincent, vice president of engineering, Packard Motor Car Company.)

After nearly two years' general use, during which none of the dire things that were predicted occurred, four-wheel brakes now are accepted as a matter of course by the American public. They have proved themselves so conclusively as a means of added safety and comfort in driving that there now is no longer any of the discussion which marked their widespread use in this country with the advent of the Packard Eight in June, 1923.

Probably no major motor car improvement has become so indispensable with so little experimentation after its introduction to the public in so short a time. It probably is also true that no improvement in motor car design so quickly dispelled adverse criticism. This undoubtedly is due to the fact that four-wheel brakes had passed completely out of the experimental stage when they were introduced generally in the United States.

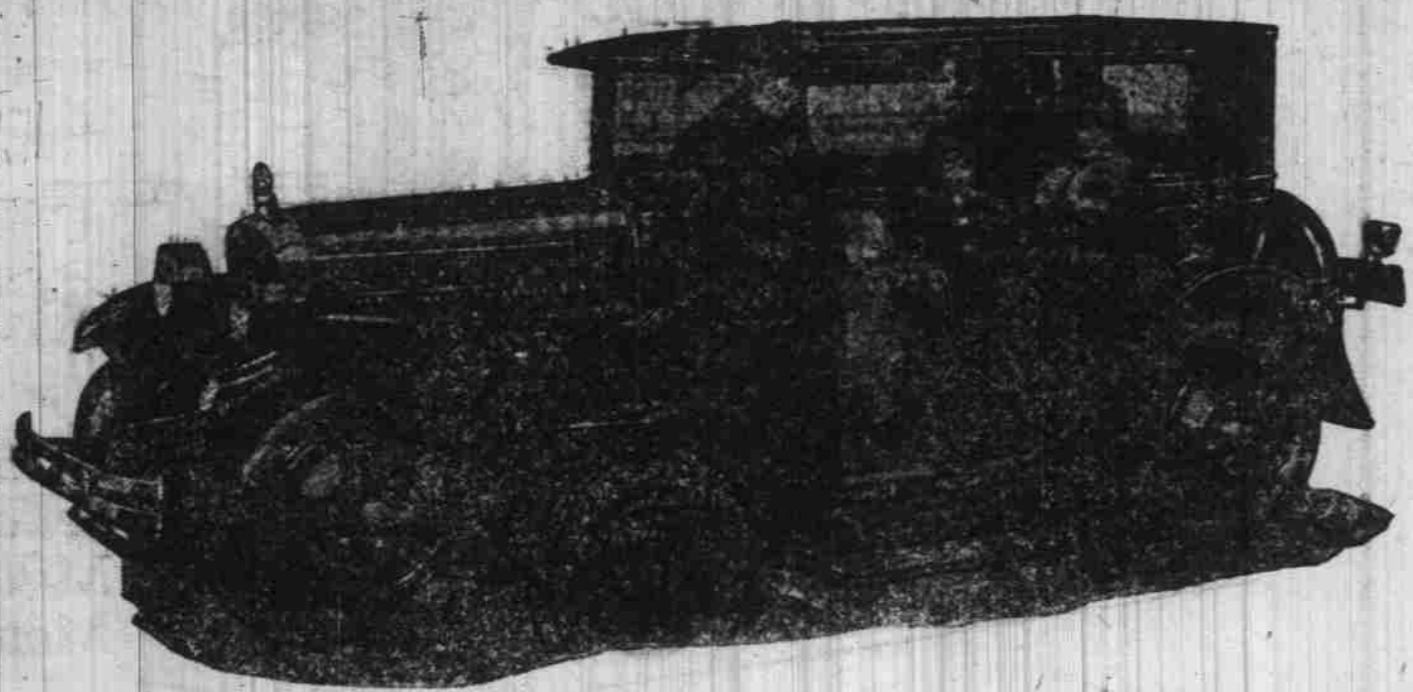
Brakes on front wheels had been in use in Europe for a very considerable time and from their use had come many valuable lessons for the American engineer. However, for years engineers here had been at work on four-wheel brakes before the war and in 1919 we had developed our system of brakes almost to their present point.

In the year and a half that front wheel brakes have been in use in this country it has been proven rather conclusively that there are only a few fundamental engineering principles which must be observed to meet with best results. Chief of these are that there must be maintained a fixed ratio of braking pressure scientifically predetermined as between the front and rear brakes and that there must also be an equalization of pressure between the brakes on opposite wheels.

Our own experience has proven also that best results are obtained by the use of internal expanding brakes on the front wheels and external contract bands on the rear wheels.

Four wheel brakes are in use in numbers sufficient to make themselves felt as an aid in solving traffic problems. Hundreds of thousands of cars equipped with rear wheel brakes only of course are still in use and such cars cannot be handled as easily

50,000 Radio Fans Present WOAW Minister with New Nash Sedan



Just how thoroughly Reverend R. R. Brown, radio pastor of station WOAW, is appreciated by his Sunday morning listeners is strikingly evidenced by the hundreds of gifts he has received regularly from members of his radio congregation. Country eggs by the dozens, honey, bulging

hams, candy, cakes, of the best home-made variety; pictures, brooms, and numerous other articles are some of the means by which his listeners have shown their admiration and affection.

And now as a grand climax to these individual gifts a concerted token of appreciation from 50,000 of his listeners has been presented to Pastor Brown in the form of a gleaming new Nash Advanced Six Sedan. The car came as a complete surprise to Reverend Brown and he was almost overcome with gratitude and delight.

in traffic as can four wheel brake cars, especially at this season of the year. As cars with rear wheel brakes only grow less in number and four wheel brakes increase traffic conditions will improve.

It will be only a comparatively short period of time before it will be possible to stop every car traveling at a legal rate of speed in any city within a few feet. Just what this means can be realized if one's imagination could conceive a signal to stop being given every car in New York at exactly the same time and every car being brought to a stop in 25 feet.

As a traffic aid alone four wheel brakes would have proved themselves. In addition, however, they have made the driving of a car easier under all conditions, both in the country and in the city and the added feeling of security obtained by a driver through his knowledge that his car is equipped with four wheel brakes properly designed so that they will work properly has proven a big factor in the success with which front wheel brakes have been met.

CHART SHOW GROWTH

A graphic growth chart has just been prepared by the Olds Motor works, Lansing, Mich., showing the increase in sales and sales force during the past three years. Automobiles in graded sizes picture the increase in business, the one representing 1924 being two and a half times larger than that of 1922. In 1923 sales increased 64 per cent over those of 1922, while total sales for 1924 amounted to 126 per cent more than the total for 1922.

1000 CARS A DAY NOW BEING BUILT

Ninety Per Cent of This Figure Is Hudson and Essex Coaches

One thousand cars a day—the biggest six-cylinder business in the automobile industry—are now being built in the Hudson-Essex factories in Detroit, according to word received by Fred M. Powell, Hudson-Essex dealer.

Ninety per cent of this immense business is in the popular Hudson-Essex coaches, it was declared. The coach type of body was originated by the Hudson organization three years ago, and this concern now has had the experience of building nearly a quarter of a million of them.

"This great volume of business which has brought Hudson-Essex into an indisputable six-cylinder leadership for the whole industry," said Mr. Powell, "has been a steady growth over a period in which the coach has never been a single body type in the whole history of the business which has had such a phenomenal success.

"Now the popularity has become such that Hudson-Essex is the biggest builder of six-cylinder

cars in the world. When you consider that some automobile men tried to ridicule the coach when it was first introduced, the success of Hudson-Essex must be considered a most remarkable one. This spring there will undoubtedly be a shortage of these popular cars, because our winter business has been so consistently good that we have been unable to build up a reserve supply of them. It is fortunate indeed that the Hudson-Essex factory has been able to reach this high mark of production, or the shortage would be even more drastic.

"The thinking motor car buyer must ask himself, what is behind this success. My opinion is that Hudson-Essex do not emphasize any one feature of their cars, but make every attempt to build in all-around value. The public asks for reliable transportation at the right standard of prices. Month after month it is this type of buying which has kept Hudson-Essex in a position of uninterrupted sales leadership and public demand.

"April will be the largest month we have ever known. The last few days have shown a sharp upward trend in demand—the first sign of the spring rush. The greatest number of inquiries is for coaches—and this is true, I understand, with all lines of cars. But for a long time to come the man who thinks of coaches will think of Hudson and Essex."

Ideal Homes Sought For Disabled Veterans

DETROIT, April 4—An endowment fund with which to maintain Spencer Manor as the home of disabled and aged veterans, their widows and orphans, is contemplated by the National Veterans of foreign wars.

Spencer Manor, a 472-acre tract of rolling country land near Eaton Rapids, Mich., and fronting for a mile on the placid Grand river, was the gift of Corey J. Spencer, wealthy clubman of Jackson, Mich., and a member of the order, "A village full of life, hope and happiness" is Mr. Spencer's idea of what Spencer Manor should be.

The tract of land which he devoted to the organization lies between Jackson and Lansing and is of clay loam. All but 100 acres of the soil is tillable. Giant trees, small brooks and springs and numerous glens add to the attractiveness of the site. It is here the V. F. W., looking forward, hopes to see grow a village of neat little homes, with well kept gardens, a school for children and a place for Sabbath worship. "A home rather than an institution," is the way officers of the organization outline the project. It is intended there shall be work for those who can work, and comfort for those unable to labor.

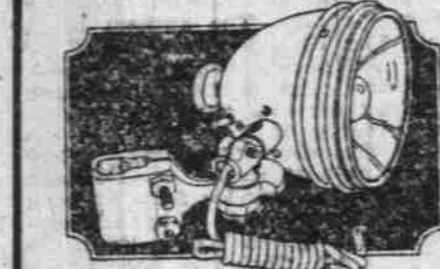
London Gives Badges To Careful Chauffeurs

LONDON, April 4—Of 13,182 London vehicle drivers, most of them chauffeurs, who entered a "safety first" competition instituted by the London City Council, 8,309 went through last year without an accident and have been awarded special mention and badges.

All the drivers thus recognized, and especially the taxi-cab drivers, count it a distinction to wear the council badges.

Make your motoring trip safer—more enjoyable, more comfortable, more economical

"Darsie" Spotlights



An addition to our complete line of Spotlights. The Darsie has rapidly taken its place among the leaders. The Darsie—a double shell spotlight—is constructed entirely of brass—the reflector is heavily nickel-plated and highly polished—waterproof and dustproof—fittings are nickel-plated—a high quality lamp and durable. Price, each.....\$7.50

"Handy" Cigar Lighter

Enables the driver to keep one hand on the wheel while lighting a smoke. Then, too, it is in keeping with the keynote of modern motoring—it is safe. Price, each.....\$2.95

Wind Wings



The "Comfy" wing is suitable for all makes of cars—made of crystal plate glass with brackets of baked on black enamel—can be adjusted to any angle. Here is your opportunity to get a set of wind wings at an exceptionally low price.....\$4.85. Others up to \$12.45.

Examine the Contents of the Tool Box

Be sure every necessary tool is in it—it pays to be ready to take care of quick repairs on the road. We have for your approval a complete line of dependable tools. Be prepared.

Steering Wheel Covers
The high quality elastic rubber cover that gives a positive, easy grip on the steering wheel. \$1.40 and \$1.45 according to size.

Order by Mail
Our Guarantee Protects You

No matter what make of car you drive, there is always some equipment you can add which will give you greater safety—comfort—pleasure and economy. You owe it to yourself and those who ride with you to install that necessary equipment.

Inspect "Western Auto's" complete stocks of Accessories and Supplies—you will surely find just what you need at reasonable prices.

This Week Special Safety Stop Signal



This is an exceptional value—the regular price of this stop signal is \$1.45—the signal is complete with wire, switch, etc. One of these installed in your car helps to eliminate rear-end collisions. This week, special price is.....98c

Double Duty Bumpers



These bumpers lend grace to any car and are approved by insurance underwriters. Made of high carbon spring steel, tempered in oil and heat treated in copper plate, then nickel plated and highly polished. The spring steel black enameled bar between the nickel-plated bars gives added strength. 1 1/2-inch bar, for medium and large cars.....\$15.80. 2-inch bar, for larger cars, \$18.75. Twin Bar Bumpers 1 1/2 inch, Regular—\$12.70. Twin Bar Bumpers 1 1/2 inch, Large—\$15.80. Special Twin Bar for small cars—\$9.85.

McKay's Chains

These chains go through a special process of hardening that gives them 50% greater strength and durability. A set should always be carried in the car at all times. \$4.25 to \$11.15 according to size.

Pyrene

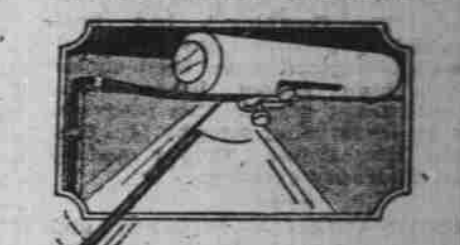
With a Pyrene Fire Extinguisher as part of the equipment of your car you can save 15% on your fire insurance premium—you can safeguard yourself and your machine. Each.....\$12.00

More than 100 stores—all over the West

Western Auto Supply Co.

Salem Store Corner Court and High.

Automatic Windshield Cleaner



Why worry along with a blurred windshield when you can install an automatic windshield wiper at this low price? It works automatically from the manifold. Both hands on the wheel at all times. Prices are.....\$2.55 and \$3.85

Hand Style Windshield Cleaners, 45c to \$2.35

for emergency use!

Tire trouble is a source of grief and worry, especially if you are not prepared for it. As a precautionary measure, carry along some of the emergencies listed below.



Valve Insides

Genuine Schrader, per box of 5.....25c

Tire-Cut Filler

A rubber putty that fills cuts and holes—handy tube.....35c

Patching Cement

In tubes and cans.....10c to 48c

5-Minute Vulcanizer

Complete with 12 patch units.....\$1.15

Sure-Hold Patch

Complete outfit, 72 sq. in., including cement.....50c

Everlastic Rubber Patch

Complete with cement—50 square inches.....30c

Complete line of Jacks, Pumps, Blow-Out Patches, etc., at unusually low prices.

For Your Convenience Open Till 9 p. m. Saturdays

The Future

Tomorrow's car will be some type of closed car. More and more the public is insisting upon the protection of a solid construction in the top, either of wood or of steel. The man who buys a soft topped car today must stand a heavy depreciation as tomorrow's car will have the protection, the safety of a solid top. If you prefer an open car buy

A STUDEBAKER Duplex Phaeton

with the steel top and roller enclosures and get the protection and comfort of the closed car plus the freedom and airiness of an open one.

Thirty Seconds from an Open to a Closed Car

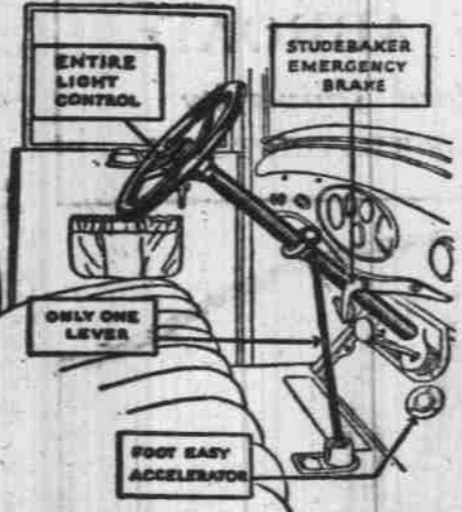
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CAR CONTROLS



Once, levers stuck out all over an automobile. Controls were scattered all over the dash, on the instrument board, under the wheel and anywhere else the imagination might dictate.

No longer. Congested roads mean that the lighting control must be on the steering wheel, at finger tips, so the driver need not take his eyes off the road just at a critical time, to dim his headlamps.

The extra emergency brake lever took up the most important 10 per cent of driver's space. Now that's gone, giving the space back. The lever projects out from and under the instrument board, out of the way, grasped more readily than before.

Instead of a high pedal for the foot accelerator, best practice now has it half a sphere, so the foot can be applied from any side, and may rest comfortably on the footboard.

Drivers should insist on these conveniences.

Technical Debate to Mark Meeting of Oil Geologists

WICHITA, Kansas, April 4—sub-structure of the principal crude oil fields in the world will be visualized, dissected and discussed during the convention of the American Association of petroleum geologists, which meets here. Treatment of this subject occupies the most prominent place on the program, and will be handled by geologists representing all states and several foreign countries.

New light on the general stratigraphic background of the Kansas fields, the sub-surface stratigraphy of western Oklahoma, the San Angelo formation in Texas, the

upper cretaceous diastrophism and sedimentation in Montana, the age and correlation of the kreynen, hagen in California, carbon ratios, and petroleum in Illinois and the permian of India, is expected to be thrown on these fields in more than 80 papers to be read before the convention.

London Asks Inventors For Fog Exterminators

LONDON, April 4—The latest effort of science to rid London of its annoying fogs by means of suction fans has been a failure. The fans were attached to a condenser box, which received the dirt-laden fog and, by means of

heat, reduced it to ordinary atmosphere, which was allowed to escape minus the soot and dirt. The suction fans varied from three to 18 inches in diameter and were powerful enough to handle several hundred cubic feet of fog a minute.

The inventors took advantage of the several dense fogs during the winter to test their exterminator, but they have now admitted its impracticability because it would take, they say, at least 750 condensers working together materially to affect even a light fog. The condensers would have to be placed in the streets, on roofs and poles throughout the city, and such installations would cost about \$25,000,000.

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