

EXPERT SEES USE
OF FRONT DRIVEMakes Prediction That
Extensive Adoption Will
Come in Few Years

By ISRAEL KLEIN
Science Editor, NEA Service

Although many American engineers believe that the disadvantages to the front-wheel drive automobile far outweigh its advantages, Herbert Chase, New York automotive engineer, predicts its extensive adoption in this country within the next few years.

Chase ventured this opinion recently in a talk before the Society of Automotive Engineers, at Quebec, and backed it up with a long array of facts. He balanced the advantages against the proclaimed disadvantages, and is inclined to favor this type of drive against the present conventional form. These advantages, according to this engineer, are:

"1—Relatively unencumbered space for a body of almost any desired design, floor height and dimensions.

"2—Elimination of a bulky and complicated rear axle.

"3—Possibility of improved riding qualities, including less pitching.

"4—Increased safety due to less skidding tendency and to ability to take turns at higher speed.

"5—Driving force always applied to the wheels in the direction of their motion.

"6—Elimination of a long propeller-shaft, and substitution of shafts having lower speed and less tendency to vibrate.

"7—Possibility of improved traction under certain conditions.

"8—Possibility of greater quietness and freedom from body rumble.

"9—Ability to provide front-wheel braking without carrying brake-drums and operating mechanism on wheels or axles.

"10—Cheaper to maintain.

"11—Lower upkeep costs due to greater accessibility and better lubrication.

"12—A less expensive rear axle and a simplified frame-construction.

"13—Freedom from shimmy tendencies.

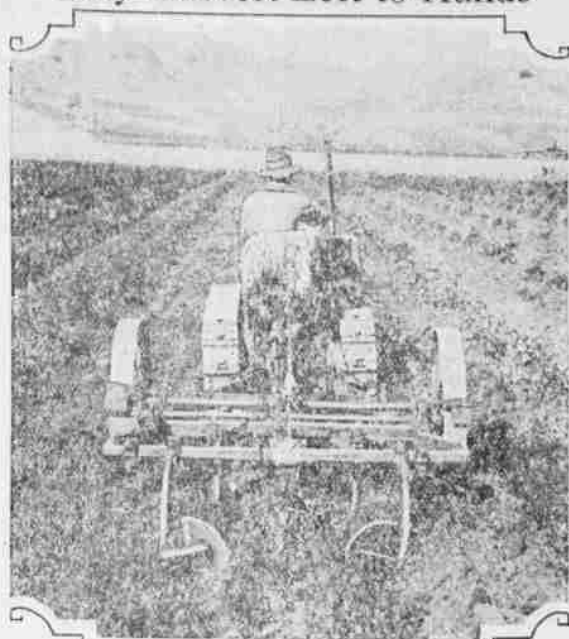
"14—A possible decrease in tire wear due to lessened skidding tendency.

"15—Decrease in the total weight of the vehicle.

"16—Decreased side-sway.

"17—Increased thrust on front-

Only Harvest Left to Hands



A few years ago, thousands of orientals used to creep on their hands and knees, transplanting and cultivating the huge tomato crops of California. Today, only the harvest is done by hand. The other operations have been mechanized, as this photo shows. This was taken on the 135-acre tomato farm of George K. Matsuka, at Miraflores, Calif.

Anti-Knock Fuel Not Intended To
Clean Out Carbon In The Engine

By Israel Klein
Science Editor, NEA Service

One error modern motorists fall into is that of depending on a "doped" gasoline to clean out the carbon of their engines.

No anti-knock fuel is intended for that purpose. It is merely a chemical that assures perfect and complete combustion of the fuel mixture.

By its use there is greater fuel economy, no detonation, no crankcase dilution and more power.

But to expect such anti-knock chemicals to clean out carbonized cylinders is to expect too much. With carbon in the cylinder

head and atop the pistons, anti-knock fuel will merely prevent detonation. The carbon will remain until it is cleaned out. If there isn't too much of it, it may even be helpful toward perfect combustion and high power, for the carbon remains hot even after the charge in the chamber is fired and serves to heat up the next charge.

Anti-knock chemicals, usually, consist of fine particles that burn almost immediately upon firing of the spark plug, scatter quickly through the entire fuel mixture and serve to ignite the entire charge of fuel and air almost instantaneously. The result is that there is no waste of fuel, and especially that none is left behind to heat up and ignite the next incoming charge before the spark has been fired. This is how detonation results from incompletely exploded fuel charges, and this is why there is no detona-

tion. In connection with the teaching of safety in the schools, how a part of the curriculum in many states, the A. A. A. said that while those children who have had one or several years in school have been taught the rudiments of safety, they cannot always be expected to exercise the utmost care. After playing during the summer on safe playgrounds, there is always a tendency toward a let-down in their safety sense when they first return to the streets.

"The reduction of accidents that is traceable to the establishment of these patrols in hundreds of schools throughout the country is evidence that the courteous helpfulness of motor car drivers has been extended to these youngsters whose white belts and arm bands identify them as safety reinforcements. There is every reason to believe that still greater cooperation will be given during this school year."

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Many more schools will have patrol this year, the A. A. A. leaders declare. There is no question but that they will result in the saving of many lives because the patrolman is respected not only by the motorists but by the children whom he is trying to aid.

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Discussing the schoolboy patrols which were organized by the A. A. A. motor clubs in cooperation with school authorities in scores of cities, the national motorizing body says:

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URGE MOTORISTS
TO WATCH TOTSReopening of Schools Creates
More Hazards
—Warning Issued

WASHINGTON, D. C., Sept. 22.—Reopening of public, private and parochial schools in all parts of the country will create definite hazards in every municipality and rural district, and it is distinctly up to every motorist to drive in such a way as to overcome those hazards.

This is the keynote of a warning issued today by national headquarters of the American Automobile association, in which it is pointed out that the prevention of accidents involving school children is largely within the province of the individual motorist.

"School days are here again," says the statement, "bringing millions of children upon the streets and highways. Among these millions are little ones of four, five and six years of age who for the first time are leaving the protection and safety of their homes to venture forth into an entirely new world. This new world will have problems enough for these children without that of the recklessly driven automobile."

Safety taught in schools.

"While the teaching of safety in the schools throughout the country and the effective work of the school boy patrols has done much to protect these tiny tots, the problem still remains as a challenge to the motorist," the statement declared. It continued:

"If every motor car owner always kept in mind the enormous difference his care and consideration would mean in keeping these children safe from physical harm as well as from a fear that may mar the rest of their lives, there is no question but that a motorist would be taken toward street and highway safety in so far as it affects the younger pedestrians."

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Ten Commandments
For Motoring Given

The "Ten Commandments" of motoring have been promulgated for the motorist by Dr. H. B. McDaniel, president of the Oregon State Motor association. Dr. McDaniel "commands" this creed to the constructive motorist and if followed, promises pleasant and safe driving conditions for all.

"I will obey all the laws of the state and municipality in which I am driving my car."

"I will have my car in perfect mechanical condition so as to avoid accidents."

"I will keep my car under control at all times."

"I will be on the lookout for children and heedless pedestrians who might dash out into the street without warning."

"In the event of an accident I will stop and render assistance."

"I will observe conditions of the highway which make driving dangerous and support efforts to have such conditions remedied."

"I will interest myself in legislation designed to benefit motorists and do all within my power to prevent enactment of unreasonable restrictions."

"I will warn others who violate the law, and report their violations, if serious."

"I will co-operate with the officers of my club in all public movements having for their purpose the safeguarding of life, the furthering of better roads and the defeat of unfair laws."

"And I will so conduct myself and drive my car as to keep the automobile in good repute in the community."

Nationalists In
Sweeping Victory

SHANGHAI, China, Sept. 22.—(AP)—Advice from Manchuria Friday reported surrender of the remnants of the Shantung-Chihli army to the Manchuria commander, General Yang Yu-Ting.

company for a directly opposite purpose. It is the basic material used in the manufacture of Rusco Brake Lining. It enables motorists to join on the brakes with the certainty that they will hold, and, at the same time not skid along the highway.

Unlike the thin strands of asbestos, woven with silk which were employed by the Egyptian siren, the strands of asbestos used in Rusco Lining are very coarse and twisted with brass wire. These strands are woven into a solid, compact fibre on mighty ten ton looms, the largest in the industry. Brakes get more than a thousand

times as hot as Cleopatra's love letters—so it's a wise idea to see that they're equipped with a lining manufactured from high grade asbestos and especially prepared to withstand high friction. The makers claim Rusco is such a lining, and in addition it will brake equally as well in wet or dry weather.

BLAST KILLS 20
NANKING, China, Sept. 22.—(A.P.)—Twenty persons were killed or injured in an explosion of munitions in Nanking Friday. The munitions were being transported through the city in carts. Several houses were demolished.

Mr. Stettler bases his statement on figures furnished by the Research department of the A. A. A. showing that in 1927 more than five and a quarter billion dollars was spent with service stations and repair shops by car owners.

"This gigantic sum," he continued, "was divided as follows:

Fuels and service supplies, \$259,000,000.

Tires for replacement, \$225,000,000.

Fuels and lubricants, \$2,550,000,000.

Service labor, \$1,092,000,000.

In 1919 the total amount was \$2,125,000,000, while in 1926 it reached the sum of \$4,815,000,000.

"The large amount of money spent in this way," he continued, "does not include the sum chargeable to depreciation and amortization."

Mr. Stettler declared that every repair shop in the United States has an average clientele of 251 motor cars. This statement is based on the 1927 motor vehicle registrations and a total of \$2,953 service stations and repair shops.

LOVE LETTERS ON ASBESTOS

The material that withstood the burning words of love penned by the Siren of the Nile, ought to resist any kind of heat—and apparently it does.

Asbestos, the basis of the fabric used by the Egyptian queen for the amatory correspondence which caused Marc Anthony to take off the brakes and skid down the highway of love, is oddly enough the same kind of material which is used by the Rusco Manufacturing

Drivers Spend
Five Billions
At Repair Shops

Motorists of the nation spend the staggering sum of over five billion dollars annually with service stations and repair shops, according to F. C. Stettler, treasurer of the Oregon State Motor association for the past 19 years, which is affiliated with the American Automobile association.

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company for a directly opposite purpose. It is the basic material used in the manufacture of Rusco Brake Lining. It enables motorists to join on the brakes with the certainty that they will hold, and, at the same time not skid along the highway.

Unlike the thin strands of asbestos, woven with silk which were employed by the Egyptian siren, the strands of asbestos used in Rusco Lining are very coarse and twisted with brass wire. These strands are woven into a solid, compact fibre on mighty ten ton looms, the largest in the industry. Brakes get more than a thousand

times as hot as Cleopatra's love letters—so it's a wise idea to see that they're equipped with a lining manufactured from high grade asbestos and especially prepared to withstand high friction. The makers claim Rusco is such a lining, and in addition it will brake equally as well in wet or dry weather.

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