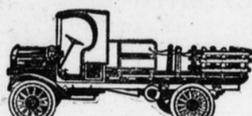




AUTOMOBILE SECTION

AUTOMOBILE NEWS AND ADVERTISING



'STEPPING UP' THE REO SPEED WAGON

Hang Trailer on Rear in Order to Increase Capacity

Hauls

Unusual flexibility, additional capacity and reduced cost of heavy hauling is being accomplished daily by the conversion of the Reo "Speed-Wagon" into a tractor to pull trailers and by using it as a single unit with its own body, with a semi-trailer, or to carry its own load in addition to pulling a trailer.

The transportation problem of today is one of speed and tonnage, and it is being solved by the speedier smaller units and more of them.

Nothing gnaws at the truck owner's pocketbook as much as a big unit half loaded or returning home empty unless it is an idle truck, and the time lost while loading or unloading is an expense even if it doesn't eat when it doesn't work as truck folks like to put it, because the fixed charge of insurance, depreciation, interest on the investment and driver's wages carry on just the same.

One of Detroit's largest manufacturers had a problem of disposing of its cinders. By using the combination shown in View C they have done away with five railroad cars (big units) and a clamshell bucket and saved \$12 per day.

By having several trailers some can be loaded while others are being carted to the dumping ground and the truck is never idle.

The Braun Lumber Company have found the semi-trailer in combination with the tractor the only solution to the lost time evil in the lumber business. Lumber and kindred commodities can be loaded on one semi-trailer with the front end propped up while the "Speed-Wagon" is hauling a loaded unit to some anxiously waiting customer. They claim as little of the driver's time is lost as it is humanly possible to minimize.

While the huge Ford blast furnace was being erected at River

Five Ways to Make Your Battery Last Longer

1. Keep battery charged and filled to the proper level with the distilled water.
2. If your engine doesn't start quickly make sure that gas and spark are right.
3. Release starter at once when engine begins to run on its own power.
4. Keep your spark plugs in good condition.
5. Prime the engine if it's cold.

Rouge (just outside of Detroit) a tractor-tied Reo "Speed-Wagon" was employed for heavy hauling. The load in view "B" consists of eleven tons of steel truss rods. The Reo reduced the haulage costs from \$2.25 to 86¢ per ton.

In the case of Haight's Express the owners needed something larger than a standard Reo "Speed-Wagon" but could not be satisfied with anything short of a Reo model; so they increased the capacity by using one of the heavy duty attachments and now the "Speed-Wagon" is a sure enough two-tonner.

These attachments, by the way, are not form-a-trucks. The "Speed-Wagon" is a truck from the ground up in the first place and it is a simple case of conversion, including a further reduction in the gear set. These combinations are always superior to heavy units. The day seems to be coming when Highway Commissioners will rule trucks above certain weight and capacity of the improved roads.

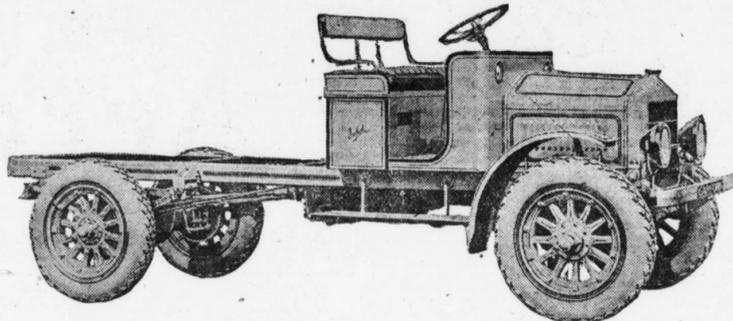
Heavy units, of course, have their place, but the smaller unit is the more flexible and easily adaptable to the majority of occupations for which the truck is engaged.

PERPLEXING

An Episcopal clergyman who had but recently come to a certain neighborhood passed twourchins on the street.

"Good morning, Father," said one of them, misled by the clerical garb. "Don't you know nothin'?" said the other contemptuously, when the minister had passed. "Dat guy ain't no father. Why, he's married an' got two kids."—Boston Transcript.

GARFORD ANNOUNCES NEW TON-AND-A-QU ARTER MODEL



The Garford Motor Truck Company, of Lima, Ohio, announces the addition of a ton-and-a-quarter truck to its already extensive line. It is to be known officially as Model 25.

This latest Garford development is described as having ample wheel base and body space and is said to be the "muskiest" model of its capacity produced to date. Provision has been made for the installation of electric lights and an electric starter.

The engine, of 22 horsepower, S. A. E. rating, has four cylinders 3 1/4 x 5 1/2 inches cast in one block, with heads and valve chambers integral. The valves are large and ample water jacketing is provided. With the valve location on the right side and the carburetor on the left, the gas passes through a water-jacketed section of the cylinder.

The engine is of sturdy design, employing a heavy crank shaft of the three bearing type, and cast iron upper and lower crank cases. The fly wheel is enclosed in a housing integral with the crank case.

The oiling is of the constant level splash system. A gear pump driven by the cam shaft circulates oil through a steel tube system to the main shaft bearings, the overflow oiling the piston

and cylinder. Lower rod bearings are filled by splashes dipping into troughs filled by a feed from the gear pump.

Ignition both on the standard and the electrically equipped models is by straight, high-tension magnetos. The magneto is controlled from the steering column. The spark plugs are located over the inlet valves.

Carburetion is obtained through a Stromberg one-inch float-feed carburetor. The throttle control is by foot acceleration as well as by hand throttle from the steering column.

The design of the Model 25 is characterized by its heavy shafts and large bearings. It provides for direct attachment of a power tire pump. The front drive shaft employs a pair of composition discs. The drive is tubular, requiring no lubrication and eliminating the possibilities of grinding and rattle.

The Model 25, virtually a ton-and-a-quarter truck, embodies characteristics of strength obtainable in a truck of one and one-half ton capacity. It has a one and one-half ton rear axle and a one and one-half ton frame, with a transmission of same type.

The standard tire equipment is of the solid pressed on type. The front tires are 36x3 1/2 inches; the rear 36x4 inches. Pneumatic tires, which are particularly adapted to this new model, come as extra equipment.

The curved steel dash and seat box are included as standard equipment with the chassis. These units are of high quality wood with a covering of heavy gauge body steel.

The control is standard with the steering wheel at the left and the brake and the clutch at the center of the chassis. The spark is controlled from the steering column.

The lamp equipment includes two side oil lamps mounted flush in the dash—a special feature—and one rear signal lamp. The seat is extra wide and carries three persons comfortably.

A special effort has been made to standardize the Model 25 throughout with the result that odd wrenches and spanners are not required. A full set of tools is included in the price of the chassis which is quoted at \$1,890, f. o. b., Lima, Ohio.

PRODUCTION OF NEW OVERLAND MODEL 4 BEGINS

New Car Has Been Exhaustively Tested and Perfected During Last Two Years

Production of the new light four cylinder car, held up for the last two years because of war conditions, has been begun by the Willys-Overland Company, of Toledo, and shipments to dealers are being made.

The car is known as Overland 4. Its production, which marks the culmination of one of the most interesting undertakings in the history of the automobile industry, is a tribute to the persistent purpose which has guided President John N. Willys of the Willys-Overland Company since he built the first Overland car ten years ago.

Back of the whole production plan has been the equally great development of the Willys-Overland engineering department. Heading the department are men who played a prominent part in the development of Packard, Cadillac, Pierce-Arrow and other notable cars.

The development of the new car from an engineering standpoint represents a concentration of skill as intensive as the manufacturing skill concentrated in its production. Chief among the many engineering features of distinction in the new car is the new spring suspension which it is said, after two years of exhaustive test, marks a really notable advance in motor car riding qualities.

More than 30,000 employees in the many allied Willys-Overland industrial plants have taken part in the development and production of the new car. Although the announcement of the new months, under pressure, to produce the

model was made more than two years ago by President Willys, the entire interval, according to him, has been devoted to perfecting details, improving and refining the car, with a view to bringing every part up to the standard of its riding qualities which are said to be exceptional.

Plans call for an output that will greatly exceed that of any single Overland model yet built. To affect these plans and bring the new car into actual factory production has required the complete readjustment of the production program of the Willys allied plants.

The size of this achievement is more readily understood when it is realized that barely eight months ago, the Willys-Overland industry was almost entirely devoted to war production. Following this came the readjustment to motor car production which reached 425 cars a day; then a complete new adjustment has been made to a new car program without holding up the production of current models on order from dealers.

Since the armistice was signed, factory routine and methods have been simplified; specially designed machinery built and installed for making the new car parts. For the insurance of permanently attractive finish, three batteries of electric ovens, each about 150 feet long and 40 feet wide, have been constructed at the factory and through these the all-steel bodies of the new car will pass through a series of enamel coating and bakings under high temperature.

To assure uniformity of steels in the new car, a new system of inspection was installed. Expert metallurgists from the Willys-Overland begin their inspections and tests at the mills and this inspection is constant at every operation until the car leaves the factory. Steel mills, accordingly, have been organized to meet the strict Overland requirements for the special alloys and steels in the new car. Raw material markets have been organized to provide for a steady flow of the required materials.

Allied plants have been at work for months, under pressure, to produce the

specially designed lighting system, steering gear, bearing and other parts essential to the new Overland.

But this picture gives only a limited idea of the tremendous concentration of resources which are brought to force in the first production of the new car. To be fully conceived, these great special preparations must be seen in the perspective of the existing structure of the Willys-Overland organization of which the Toledo plant alone comprises 120 acres of floor space and thirteen miles of private railroad yards with provisions for loading and unloading 1,000 railroad cars a day.

Not alone in material preparations but in the training men as well, the Willys-Overland organization has made seven-league strides in preparing for the new car. A training school of huge proportions has been in operation for months training mechanics. The school follows the plans used by the United States Government so successfully in training men intensively during the war. It is headed by the man who directed for training for the Department of Labor during the war. By this plan, hundreds of men while working under good wages are trained to greater perfection, higher skill and better jobs. This in a measure explains the Willys-Overland Company's herculean achievement in arriving so soon after the war in production of the new car.

OUT OF SIGHT, OUT OF MIND

"Your name will echo down the corridors of time."
"No, it won't," replied Senator Sorghum. "A man goes out of attention quickly these days. Three months after he's out of office he's lucky if he's important enough to be paged in a hotel lobby."—Washington Star.

Prest-O-Lite Battery
"A SIZE FOR EVERY CAR"
Atlas Electric Service Co.
FISHMAN'S GARAGE
Fourth and Chestnut Sts.

LANDING FIELD FOR AEROPLANES HAS BEEN LEASED

Automobile and Aeroplane Mechanical School Secures Big Field

Announcement is made on another page of today's paper of the leasing of a twenty-five acre field in South Harrisburg, that when leveled off and put into shape, will be used as a landing and training field for airplanes. This lease is held by the Automobile and Airplane Mechanical School of Steelton, who expect to move their entire training quarters to this new location. The entrance to this field will be on Sycamore street. It is bounded on the north by Paxton street, on the east by South Sixteenth street, on the west by South Thirteenth street and on the south by Sycamore street.

The Automobile and Airplane Mechanical School has a competent aviator here who will soon begin giving instructions to the 45 students who are training to become aviators. It is also said by the management that persons who may desire to get a flight over the city will be able to do so. These plans are now being worked out.

DOING HER BIT

"Yes, grandma," said the fair young thing, "I am to be married during the bright and gladsome month of July."
"But, my dear," said the old lady earnestly, "you are very young. Do you feel that you are fitted for married life?"
"I am being fitted now, grandma," explained the prospective bride, sweetly. "Seven gowns and three costumes."—London Tit-Bits.

FIRESTONE SHIP BY TRUCK BUREAU HAS NEW HEAD

Local Man Takes Charge to Increase Its Many Activities



J. R. STINE

Announcement has just been made by J. H. Dutch, manager of the local branch of the Firestone Tire and Rubber Company, of the appointment of Joseph R. Stine to take charge of the Firestone Ship by Truck Bureau. Ever since the installation of these Firestone bureaus in all the important cities of the United States the Harrisburg branch has been back of the movement. Already Mr. Stine has begun to co-operate all the different phases and activities of the bureau. Mr. Stine is widely known in this section and is familiar with the local needs in the ship by truck field.

The local Firestone bureau is already delving into its tasks and many shippers, merchants, manufacturers and farmers are getting in touch with it for information regarding motor express routes and lines covering their requirements. Motor express operators are also sending to the Firestone Ship by Truck Bureau all information of interest to shippers, such as routes covered, tonnage of truck, schedules, etc.

IN AND OUT

A certain State's prison installed motion pictures to entertain the inmates. When the citizens outside discovered that the pictures inside were better than the ones outside, a wave of crime swept over the city. The whole town was trying to get pinched.—Harry J. Smalley in August Film Fun.

DYKE'S NEW AUTO ENCYCLOPEDIA JUST OFF PRESS

Tenth Edition Contains 960 Pages and 3,362 Illustrations

This remarkable book has again been revised and greatly improved. It could appropriately be termed a "Repairman's Guide." In addition to its mass of information on automobiles, covering every detail from the construction and repair of the axle to the repair of radiator and top, many new subjects have been added. For instance, how to make electric tests of the starting motor, generator, battery, coils, magnetos, etc. In fact, the subjects are dealt with in such a simplified manner that one can almost understand by a mere glance at the numerous illustrations.

The storage battery subject is profusely illustrated, and anyone who can read plain English can soon learn how to diagnose trouble, disassemble, repair, assemble and recharge batteries. A feature of this instruction is a simplified explanation of the "Cadmium Test" of a storage battery. One naturally thinks of a very technical and complicated subject when reading this subject and a glance at the numerous illustrations of the "tech" part becomes perfectly clear. Then there are many other subjects which the average repairman must know about, such as fitting pistons and piston rings, etc. In order to do this work intelligently he must know how to work in thousands of parts of an inch. This subject is so simplified, even the laymen could do this work, after studying the instruction.

The tire subject is very interesting. One learns the difference between the "molded" tire and "wrapped tread" tire. The difference between the "fabric" tire and the "cord" tire and the advantages and disadvantages of each. Such subjects as blow-outs, stone bruises, loose treads, etc., are thoroughly treated with an explanation of the cause and how to repair.

The subject of vulcanizing not only deals with the "sectional" method, but also the "wrapped tread" method. The equipment necessary to start into the tire repair business is also dealt with. In fact, many pages are devoted to the subject of "how to start into the different branches of the automobile business," from building and equipping a home garage to that of one for business.

The book covers practically every phase of the automobile industry and deals with automobiles, trucks, tractors, motorcycles, airplanes, airplane engines, including the Liberty engine, fully illustrated.

There are supplements with 332 illustrations on the Ford and Packard car, part printed in colors. Every detail of the Ford is explained. For instance, how to rebuild a Ford and make it do 60 miles per hour; how to make every known repair from the axle to the engine. The Ford new electric system is fully illustrated, in fact the illustrations go so far as to show the internal wiring of the "cut-out" and its principle of operation. There are also five colored inserts, a dictionary, and a lot more of valuable information too numerous to mention.

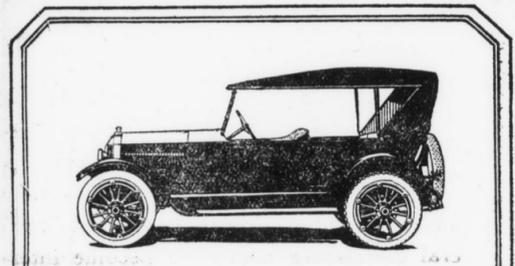
The author, A. L. Dyke, is a pioneer. He originated the first automobile supply business, published the first practical book on automobiles and manufactured and marketed the first constant level (float feed) carburetor in America.

NO DANGER

The partners of a well-known stock exchange house were having a dinner conference at an uptown hotel. One of them appeared worried during the progress of the meal and finally he was queried as to the cause of his fit of abstraction.

"I just happened to remember that I neglected to lock the safe before I left the office," he replied.

"Why worry?" said another member of the firm. "We are all here."—Nashville Banner.



Scripps-Booth

THE Scripps-Booth is the creation of careful, unhurried workmanship. It is designed with a full appreciation of the individual requirements of discriminating people—and for them. From its beautifully-shaped special silver radiator and smartly-designed body, to its distinguished appointments, genuine leather upholstery and careful finish, it embodies nothing that is common, but all that is most acceptable, in individualized appearance and appointments.

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It is unnecessary to tell car owners about their construction, for use will again prove they give satisfaction in every way. We carry the most complete stock of QUAKER CASINGS and QUAKER MULTI-TUBES and strongly recommend them to you.

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September Touring

will be ideal in a used car. Good as new bought from us. Save 40%—Time Payments arranged.

- A partial list of real values:
- BUICKS \$350. UP.
 - PAIGES 500. UP.
 - MAXWELLS 250. UP.
 - SAXONS 250. UP.
 - HUPMOBILES 300. UP.
 - STUDEBAKERS 300. UP.

And all Standard Models.
Liberty Auto Exchange,
256 North Broad St.,
Phila. Pa. Agents Wanted.

Drivers Idolize This Reo "Speed Wagon"

WHEN A MAKER CAN WIN the enthusiasm of drivers—not in occasional cases but practically without exception—he may feel he has produced something pretty nearly approaching perfection.

THAT IS THE CASE with this Reo "Speed Wagon"—the first and still the model of its class.

ASK ANY DRIVER you see on a Reo "Speed Wagon", and note not only his words, but the confident, enthusiastic tone of his voice when he says, "It is the best motor truck ever made."

ASK HIM what other makes of motor trucks he has driven—when, in what kind of service and how long.

ASK HIM THE PRICE of those others—and compare with the price of this Reo.

ASK HIM about the relative dependability of Reos and others.

ASK HIM ABOUT load capacity; and question him particularly as to how the different makes of trucks—their springs, frames, axles and motor—stand up under conditions of excessive overloading.

AND FINALLY, ASK HIM about the relative cost of upkeep of the different makes he has driven.

HIS REPLY to that query will sell you a Reo "Speed Wagon."

IF PERCHANCE he has driven trucks of about the same size and capacity, but for which you are asked to pay twice the price of a Reo, ask him about dependability and upkeep, and he will tell you you need pay no more than the price of a Reo to obtain the utmost service and the least in cost of upkeep.

HIS BOSS WILL TELL YOU that the cost per ton-mile of transporting via Reo "Speed Wagon" is almost unbelievably less.

HARRISBURG AUTO CO.

(Distributors)

Fourth and Kelker Streets
Harrisburg

Reo "Speed Wagon" (as Shown)
\$1410

Price is F. O. B. Lansing, and the Special Federal Tax must be added.

"THE GOLD STANDARD OF VALUES"