

GOOD ENGINEERS NEEDED ON ROADS

Proper Construction Work Must Result From Increase of Salaries and Elimination of Residence Civil Service Requirements, Which Have Become Antiquated

THE nation, states, counties and even the smallest townships have reached the age of understanding and appreciate the advantages of good roads. Communities which appropriated thousands five years ago are now spending millions on highway improvements.

If the funds available for 1920 is to be economically and efficiently expended, it is of vital importance that the work shall be in the hands of trained highway engineering organizations. Are experienced highway engineers available to meet the demands of the expanded program? The answer is most emphatically no, unless Congress, state legislatures and county boards pass remedial legislation. Two avenues of relief are open—first, raise salaries, and, second, eliminate all antiquated residence civil service requirements.

Salary Control

Some states have more or less flexible control of salaries of men occupying minor positions. Salaries in such positions have been materially increased in some instances. For example, \$125 to \$150 per month is now being offered in the Middle West for 1919 civil engineering graduates with a summer's experience in highway work. These salaries are a decided improvement over pre-war salaries of \$60 to \$75 per month. This favorable status of salaries does not apply to most of the higher positions.

To give some idea of the responsible positions in highway departments, the following facts relative to the personnel of the 1919 national and state departments are cited: One hundred and twenty-two chief executives and administrators, 360 division and district engineers, 3680 supervising engineers and chiefs of party and 6350 junior engineers. In order to hold capable men for the above positions and secure thousands of others required to supervise the 1920 program, which is virtually double that of 1919, Congress and the several state legislatures should establish schedules of salaries within the following limitations: Chief engineers, \$40,000 to \$15,000 per year; deputy engineers, \$6,000 to \$10,000; division engineers, \$5,000 to \$8,000; assistant or resident engineers, \$2,400 to \$4,000; inspectors of construction, \$2,400 to \$3,000; engineer draftsmen, \$1,800 to \$2,400; and roadmen and chainmen, \$1,200 to \$1,500.

Work Overlaps

Due to the development of highway transport in the United States during the last three years and its probable growth in the near future, the economic design, construction and maintenance of highways must be based upon a consideration of the effect of motor transport on the several component parts of a highway. It is evident the work of the highway engineer and the transport manager will overlap at many points.

Regulations which refer to weights, speeds and dimensions of motor trucks and trailers should receive special consideration during preliminary investigations. As an example of such requirements, there will be noted the following maximum limitations embodied in a resolution adopted at the 1919 convention of the American Road Builders' Association: Total gross load on four wheels, 10,000 pounds; width, 8 feet; over-all height, 12 feet 2 inches; over-all length, 28 feet.

Bridge Conditions

Another important factor which requires attention in the transport survey is the condition of bridges. A bridge is an integral part of a highway. It is regretted that this fact usually has not been recognized by lawmakers. Many highways are built of sufficient strength to carry the motor traffic to which they are subjected, while the bridges are so weak that their condition prevents the use of the highway by a part of the motor truck traffic. It is self-evident that bridges of trunk highways connecting municipalities should be designed for loads of not less than 30,000 pounds and it would appear advisable, considering the character of the structure, to follow the practice of the Pennsylvania State Highway Department and design highway bridges for loads of 40,000 pounds.

AUTO EXPORTS TOTAL BILLION IN 20 YEARS

THE recent assertion that three-fourths of the automobiles of the world are owned in the United States and that nine-tenths of those now in the whole world were produced in our own manufacturing establishments lends interest to a compilation by the National City Bank of New York regarding the exportation of automobiles from the earliest date to the present moment.

These figures show that the exports of automobiles and parts, including tires and engines, have in the twenty years since the exportation began, aggregated about \$1,000,000,000. The calendar year 1919 surpassed all records, even that of the war years, when we were sending large numbers of commercial autos to Europe for use in the war area.

The value of automobiles and parts, including tires and engines, exported in the calendar year 1919 aggregated approximately \$185,000,000 as against \$140,000,000 in the fiscal year 1918. The former high record, \$28,000,000 in the fiscal year 1914, all of which immediately preceded the war; \$11,000,000 in 1910; \$2,500,000 in 1905, and slightly less than \$1,000,000 in 1902, the first year in which automobile exports were considered of sufficient importance to justify a separate statement in the government record of merchandise exported. Of the \$185,000,000 worth of automobiles and parts exported in the calendar year 1919, \$35,000,000 worth were commercial cars; \$75,000,000 worth passenger; \$41,000,000 worth "parts of automobiles"; nearly \$20,000,000 worth tires, and about \$5,000,000 worth of automobile engines.

Where do they go? Literally every part of the world. France, formerly a very large manufacturer of automobiles, is showing a remarkable appreciation of the American commercial machine, the total number of commercial automobiles sent to that country in the calendar year 1919 having been about 3900, valued at over \$15,000,000, though of passenger machines the de-

mand from France is comparatively small, the total for the calendar year 1919 aggregating less than 1000 and the value less than \$2,000,000.

Great Britain, which took large numbers of commercial machines during the war period is now apparently manufacturing large quantities for the total value of commercial machines sent to that country has fallen from \$20,000,000 in 1917 and nearly \$7,000,000 in 1918 to only about \$600,000 in 1919. Cuba is apparently appreciating the auto truck, for the number sent to that island in 1919 was about 750, valued at over \$2,000,000, as against 300 in 1918, valued at about \$1,000,000.

Mr. J. E. Turner



who has been with Chevrolet Motor Co., 334-36 N. Broad St., as Asst. Mgr. and Sales Mgr. for the past four years, has resigned to accept a position with

Lorraine Auto Co.

Authorized Chevrolet Dealers
1426-28 Fairmount Ave.

Trailer Adds to Truck

With a semitrailer attachment the Maxwell is able to solve most of the heavier tonnage problems that confront the average owner, asserts William Kelley, chief engineer for the Maxwell Motor Co. With the trailer from four to six tons can be easily handled, which triples the truck's capacity.

Dodge Delivery Cars Popular

The repeat orders from firms already using Dodge Brothers delivery cars are an indication of the popularity of this type of car as an economical and dependable means of service.

Trailer Adds to Truck Capacity

With a semitrailer attachment the Maxwell is able to solve most of the heavier tonnage problems that confront the average owner, asserts William Kelley, chief engineer for the Maxwell Motor Co. With the trailer from four to six tons can be easily handled, which triples the truck's capacity.

2000-Pound Delivery Fills Need

In announcing a new design in a truck model, T. R. Lippard, president of the Stewart Motortruck Co., says: "Here is a truck the business world has wanted. It fills a definite demand. It is not a remodeled passenger car, but designed as a truck by expert engineers. There are no solid tires."

Maxwell Interchangeable Bodies

All Maxwell truck bodies are interchangeable with the same platform, according to L. C. Freeman, executive engineer for the Maxwell Motor Co. The Maxwell has a ten-foot loading space, and the bodies are adaptable to many different uses both in the city and country.

Heatset Heads Signal

James G. Heatset has been elected president of the Signal Motortruck Co., of Hosiand, resigned. Mr. Heatset has acquired a substantial interest in the Signal company.

Oldest Maxwell Dealer in U. S. A.

The oldest Maxwell dealer in the world and the longest Chalmers dealer in the present organization are a few of the titles which are proudly borne by S. L. Biever, president of the Biever Motorcar Co., of New Haven, Conn. For sixteen years Mr. Biever has held the Maxwell franchise

Furriers Use Trucks

The most recent addition of Furriers has been to the Dutch Bros' fur houses in Brooklyn—a two-ton and a one and one-half-ton Federal.

New Liberty Heats Going in Gas

Complete vaporization of the gasoline in cold weather is assured in the Liberty Six through heating of the air drawn into the carburetor, and by a further heating of the mixture in the manifold through contact with a "stove" which is heated by the exhaust.

Marmon's Improved Board

Among the features of the new series Marmon 24, with high efficiency motor, none is causing greater comment than the new instrument board on which all instrument dials are grouped together in the center of the board.

Peerless Makes Its Own Bodies

The Peerless Motorcar Co. has always produced the bodies for its chassis and has developed a corps of body engineers who from time to time have made notable contributions to the art of motorcar body building.

Earns Its Cost in One Year

"A Maxwell 14-ton truck you buy this month will make you a present of the next in one year." In the face of the latest sales department of the Maxwell Motor Co. has received by the factory prove this statement.



Templar

The Superfine Small Car

The Templar Has Taken Philadelphia by Storm!

—and here are the men who've put over The Templar Idea!

E. F. Davenport: Figure at Top Right of Group

Perhaps you recollect Davenport as a winner beyond par of bicycle races in the days when the two-wheeled machine was the ultimate in speed and in cross-country delights. E. F. Davenport is the President of the new (but perfectly arrived) Davenport Motor Company. Thirty-seven years of age, he typifies the youth of this organization and personifies the pep that has put the Templar into Philadelphia and into its rightful niche. He is Philadelphia born and bred, and has been in business in old Philly for as many years as his own true years warrant.

M. E. Jackson: Figure in Center of Group

Jackson was born in Jersey, and is not only willing, but proud to admit it—this only 35 years ago, at that. A graduate of the W. and J. College, at Washington, Pa., he has been in the automobile business all his busy life, and fully assumes the responsibility that is his as Manager of the Company.

C. A. Selheimer: Figure at Bottom Right of Group

Born in Philadelphia, as his association with such a thoroughly Philadelphia organization would demand. And, at 38 years of age, Sales Manager of the Company. And because he has been in the automobile business for a brief five years, this is rather wonderful commentary on his powers of organization and experience in control. Perhaps his former experience as an advertising man has taught him the psychology of life, but, anyway, here is word that he has been remarkably successful.

Charles Marsch: Figure at Bottom Left of Group

Charley is Service Manager of the Company, and it has been said more than once that "Service" is his middle name. Another large piece of evidence that the automobile business has its attractions for MEN, for Charley, now 38 years of age, has been in the business all his working life, and KNOWS CARS. Philadelphia born.

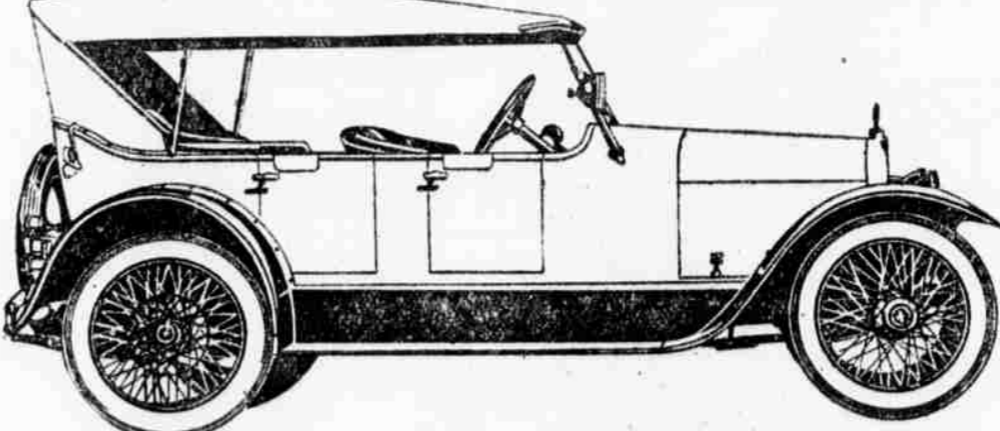


Has there ever been such a car? Has there ever been such a car that has achieved all that the Templar has achieved in the few short months of our institution here? The one brief answer is "See the Templars on the roads today!"

In the Templar superfine quality, moderate size, real economy and attractive appearance have been accomplished for the first time. Skillful engineering and clever designing have evolved a lively, sturdy, light car which is a revelation to those who believed that distinction, power, beauty and the finest materials could be obtained only in the most expensive cars.

Prominent engineers tell us that we have the finest four-cylinder motor ever built. Dealers tell us that we have the handomest small car on the market. Templar owners tell us that they are averaging 20 to 24 miles per gallon and 10 to 12 thousand miles on a set of cord tires. Ask for descriptive matter. Be sure to visit Booth 24 at the Show, on the right as you go in, and on the left as you go out!

- Five-Passenger Touring, \$2685
 - Four-Passenger Sportette, \$2685
 - Two-Passenger Touring Roadster, \$2685
 - Five-Passenger Sedan, \$3585
- Prices, F. O. B. Cleveland



The Davenport Motor Company

Booth 24 at the Automobile Show

723 North Broad Street, Phone, Poplar 7830 and 7831.

Service Station: 2012 Chancellor Street

Convenient Templar Dealers are:

Up-Town Branch
Broad & Boulevard
M. E. McDowell
Manager

MR. McDOWELL is one of the hustling kind of modern young men—a young man with a vision of Service and a full determination to sell the best car available. He chooses and recommends the Templar. Every convenience and every interest for those interested.

The Big Main Line Distributors Are: COMPTON-BUTLER, INC.

Distributors for Chester, Delaware and Montgomery Counties
"Live" as they make them, Compton-Butler, Inc., have gone the limit in backing up the Templar, because the Templar has justified such whole-hearted backing. With the elegant new showrooms and service station, now established on the City Line, at Bala, conveniences for display and demonstration are the privilege of every Main Line resident, and this is cordial invitation to come and inspect the Templar at a spot convenient to all and compatible with the worth of the car.

The Grand Garage
Wilkes-Barre, Pa.
Wm. Thomas, Prop.

The Templar is just as good a car in Wilkes-Barre as it is in Philadelphia, and so Mr. Thomas thinks, after thinking very carefully. He's proven the car and proven his faith in the car, and this proof and this faith are now the common property of Templar owners in Wilkes-Barre and the large surrounding territory.

Templar Motor Sales Co.
Reading, Pa.
H. H. Eschedor, Prop.

It enhances the dignity of the Templar and of the Templar as they are at Reading to speak of this organization as a "live bunch." Mr. Eschedor didn't "take on" the Templar until he had demonstrated the "Superfine Light Car" as the ideal machine for his customers and their needs. It satisfies the one and fills the other. Berks County is invited!

Mathis Motor Company, Inc.
Trenton, N. J.

Thos. Mathis, Pres.
Every one knows Mathis in the automobile field, and every one delights in the friendship. Convinced from experience of the merits of the Templar, Mr. Mathis has incorporated his own company and stands ready to display and demonstrate the Templar to everybody who possesses 1 per cent of interest. With Mathis and the Templar this will immediately be a 100 per cent of conviction.

"LOOK FOR THE GREEN SIGN" YOU ALWAYS HAVE A SHOW HERE

1534-36 ARCH. ST.

SEE US BEFORE BUYING ELSEWHERE WE MAKE PROMPT SHIPMENTS

Bell Phone Locust 5854 ESTABLISHED 1910

New Spring Installation AND Spring Repairing
For All Types of Motor Vehicles
Our Specialty

Quick, Expert Service at Reasonable Prices

Many Dollars Saved With **TECO** Spring-Steel Bumper

TAYLOR
Spring and Equipment Co.
1722-24-26 Fairmount Ave. Philadelphia

Bell, Poplar 2115
Kerrison, Race 1041