

BIG PRODUCTION CUTS AUTO COST

P. Driscoll, Studebaker Distributor, Tells of Benefits of Quantity Production

One of the most impressive developments in the automobile industry has been the advent of large scale production, enabling motor cars of quality at a price several thousand dollars below what those of similar value would have cost a few years ago.

"If you could see some of the automobiles of five or ten years ago beside the Studebaker now on exhibition at the show you would see a very practical change that has been wrought in the automobile industry."

Quantity, production and modern methods of manufacture have solved the big problems for the motor car maker. And now cars of comparative light weight may be made of steels of greater strength, toughness and shock-resisting qualities than the steels in cars weighing several hundred pounds more.

"The story of how steel can be strengthened by alloys and heat treating is fascinating. The results are marvelous. The making of the higher grades of steel, such as are now used in Studebaker cars, has been revolutionized and in no other branch is it so evident as in the motor car industry. The metallurgist, of whom little is said these days, has been quite as great an influence as the designer, for upon him the inventor has depended for steels to meet the unusual stresses and strains of that wonderful vehicle of the twentieth century, the sturdy, high-weight automobile."

"The heat treatment of the steels used in the manufacture of Studebaker cars requires scientific accuracy. At the Studebaker automobile factories, in Detroit, which are typical of the best methods in motor car construction, the engineers have carefully worked out specifications for the heat treatment of all parts."

"An inspector, at a pyrometer, or heat gauge, watches the temperature of the furnace, signaling to the furnace tender when a change is noticeable. There can be no mistakes working by this modern method for with the pyrometer heat can now be applied and measured with the most minute accuracy."

JACKSON CAR IS 14 YEARS OLD

P. H. Keboch, 15 South Third street, who is exhibiting the Jackson at the local Auto Show, to-day had the following to say to a representative of the Telegraph:

"This car is the growth of fourteen years. It was in 1902 that the first Jackson was put on the road and such roads—for the car was a product of Michigan and the Michigan roads are the antithesis of the Lincoln Highway. So that is why this successful bit of car building earned the right to sound the slogan, 'No hill too steep; no sand too deep.'"

"George A. Matthews was the maker of the first Jackson; and he is worthily succeeded by three sons who now occupy the executive offices of the company, and also succeeded to the energy and ideals of their father, showing their superlative effort in the 1917 line, exhibited this week at the Auto Show."

"Wolverine 349" is the high light of the Jackson quartet this year, and the one model on which the factory seems to be concentrating. This chassis is shown with touring body of five-passenger and seven-passenger; four-passenger roadster; two-passenger roadster. This is an eight-cylinder car, 118-inch wheelbase; unit-pumper plant; valve in head; thermo-siphon cooling; Zenith duplex carburetor; force-feed lubrication; rear tank; full elliptic springs, rear and front; adjustable worm and gear steering; electric auto-light starting and lighting."

"The equipment of the 'Wolverine' is very complete, including one-man deadweight top; Collins curtains with curtain openers on doors, rain vision windshield; Stewart speedometer driven from transmission shaft; electric light on instrument board; electric horn; oil pressure gauge; Detroit demountable rims; footrail, coat rail, tools and jack; mechanical tire pump attached to motor."

The whole line is one four-cylinder model and three eights, representing the very best construction in each class.

BEST WAY FOR CHILDREN TO AVOID ACCIDENTS

Here are a few instructions which should be followed, thereby avoiding serious accidents:

Keep on the sidewalk. Cross the street on the crosswalks. Look up and down the street before attempting to cross.

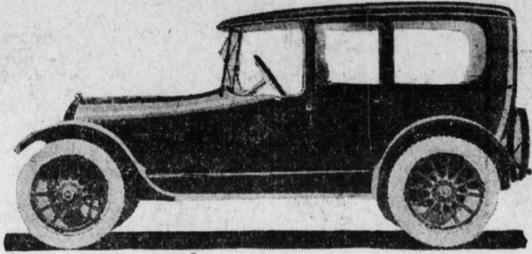
Don't play in the street. Don't "catch on" to motor cars, wagons or street cars or run in the street behind them.

Don't jump out suddenly into the street from behind teams or automobiles.

Before stepping off any street conveyance look up and down the street. Remember that the street is a place of danger; the sidewalk is the place for children "on foot."

"WATCH YOUR STEP" Remember—Safety First—Last—All the Time.

THE WILLYS-KNIGHT LIMOUSINE



The above is a reproduction of the new Willys-Knight limousines, six of which were recently delivered to Davis & Hargest, of this city.

DOES A MOTOR CAR HAVE LIFE?

According to Harry L. Myers, Battery Is the "Life" of the Car

Does an automobile have a life? In speaking of the life of an automobile, we usually refer to the length of time that elapses, or the number of miles it covers, between its delivery to an owner and its consignment to the junk heap.

"Picture to yourself a modern equipped automobile standing inanimate at the curb in front of its proprietor's residence; at will he can take his seat therein, one touch, and Presto!—the car is full of life, the lights are lit; the engine purrs; the horn blows to hurry up the tardy joyriders."

"Where comes all this life and motion? The answer, from the Exide battery?"

The Exelsior Auto Company, distributors for the well-known Exide batteries, are just about to move into their new addition which is a fire-proof, brick and concrete building, and which will give them a total of over ten thousand square feet of floor space.

In addition to specializing on batteries, electrical and electrical equipment for which they have special machinery and appliances, they will do all manner of automobile repair work, and have one of the best equipped shops for this work.

They do not intend taking the agency for a car, as has been rumored, according to Mr. Myers, but will give their customers their undivided attention.

This new building is located at the foot of the Mulberry street viaduct in Eleventh street, and Mr. Myers says he has many customers, because when it rains or snows, "some one is sure to slide in."

HAYNES EXHIBIT ATTRACTIVE ONE

Miller Auto Co., Local Distributors, Has Beautiful and Varied Display

The Miller Auto Company, local Haynes dealer, has an elaborate exhibit at its cars during the local automobile show. The local firm has been assisted in this work by the Haynes factory at Kokomo, Ind.

Speaking of the exhibit, Mr. Miller said: "We are greatly pleased with the success in getting several special cars ready in time for the automobile show. We have been so busy and work of this kind requires so much time and attention, that we have succeeded in having our exhibit ready only because we made an early start."

"Haynes cars are so popular in this territory that we were very anxious to make a splendid display, not only for the advantages of showing our cars to those who may not be familiar with them, but also to please our customers, as they are great boosters for the Haynes, and will be glad to see the car so well presented."

"Our line this year is composed of a seven-passenger model of our Light Twelve, beautifully finished."

"A four-passenger roadster on the Light Six chassis."

"A 'built-to-order' Springfield two-passenger coupe on a Light Six chassis."

"A Light Six five-passenger Springfield sedan of standard finish. Brewster green will be the season's leading color."

"We take particular pride in the construction and are naturally very much pleased to be in a position to make such an exhibit."

HARROUN'S INVENTION

An automobile bumper—the first of the records of the United States Patent Office—gave Ray Harroun his start to fame and prosperity. The fact was admitted by Harroun, who also added that the invention had turned out profitable enough to have made him independent, had he chosen to retain his rights in it.

"Ten or twelve years ago motorcars began to get hitched in Chicago," said Harroun, "and the traffic laws of the day gave but little protection. The bumper idea came to me, and I built up a model. The patent was easily secured, and the article marketed under my name. The company cleaned up a lot of money, but I sold my rights early for enough cash to build my first racing car."

FRONT-MARKET'S FINE GROWTH

Under Guidance of T. B. Wildermuth and J. A. Alexander Company Shows Growth

The most sanguine prophet, who on April 1, 1914, cast a critical eye over a little business in the accessory line, that started that day under the guidance of Troy B. Wildermuth and Joseph A. Alexander would not have felt warranted in predicting even twenty-five per cent. of the growth which the Front-Market Motor Supply Company has attained.

But one policy has been apparent in the conduct of this business, and as has been the case with others, success, growth and confidence of the public have come upon these two men in no small degree.

On November 1, 1914, it was deemed expedient to incorporate, hence the Front-Market Motor Supply Company of Harrisburg.

"The success of the business has been due entirely to the fact that the company has specialized in products known to be the best of their kind until the supreme article has been discovered, adopted and carried in stock in sufficient quantities to meet necessary demands. Among the products successfully handled by this concern are the following:

Bosch Magneto line complete. All standard makes of speedometers and parts. Stromberg and Rayfield carburetors. Knight, Buckstone, Amazon, Double Fabric and Goodyear tires. Complete line of Mobiloils. Full line of Keystone grease. Helme Springfield Ford starting and lighting equipment. S. C. Johnson's line of wax cleaner and other products. Northwestern Chemical Company's complete line. Hess-Bright ball bearings. Prest-O-Lite storage battery service station.

Three salesmen are constantly on the road in the territory covered by this company, promoting the sales of the lines mentioned above.

FRANKLIN CAR AMONG PIONEERS

America's First Four-Cylinder Car Is Being Exhibited at Auto Show

When we recall that the automobile industry is only eighteen or twenty years old and consider what was called an automobile back in the early days, it is easy to appreciate the enormous growth of the country's greatest industry for its age. Looking at the modern car, the problems of the pioneers seem insignificant. But there was a vast ignorance with regard to the internal combustion engine, the characteristics of which differed so widely from those of the steam engine in common use. Many of the features of present-day design were undreamed of then.

Among the pioneers of the industry, probably no man had more advanced ideas than John Wilkison. In 1893 he built his first "car," crudely and simply to be sure, but embodying all of the fundamental principles, such as air-cooled engine, wood chassis frame and full elliptic springs, that characterize the Franklin car to-day. In addition the engine had four cylinders, compressed air starter, surplus carburetor and jump spark ignition. The need of a transmission was appreciated, but the knowledge regarding it was so vague that it was dispensed with, the machine being built with only one speed forward and no reverse. Since his "car" had the first four-cylinder engine built in America, lack of experience in both ignition and carburetion had to be contended with. The correct application of high-tension ignition was developed only after a painful process of experimentation. Short exhibition runs were then made quite successfully.

Profiting by experience with this first model, second was built in the spring of 1900, which made "extended" country runs as high as 80 miles on one trip. In the meantime compressed air starting was abandoned as too heavy and cumbersome and the surplus carburetor gave way to the float-feed type of to-day. A two-speed transmission was then designed and a third car built in the fall of 1901. This was the model after which the eleven cars sold in 1902 were built and had a valve-in-the-head, four-cylinder, air-cooled engine, wood sills, full elliptic springs, float-feed carburetor, throttle control, single high-tension coil ignition, planetary transmission and chain drive.

It is interesting to note that the Franklin car has the distinction of being the first in America to have a four-cylinder engine (1902), the first in America to have a six-cylinder engine (1905), the first to use valve-in-the-head construction, and the first to adopt the float-feed carburetor, throttle control, automatic lubrication and drive through the springs. The present Franklin embodies all of these features.

Light weight construction was mentioned as the Franklin principle in the first catalog issued in 1902; the heaviest car in the Franklin line for 1917 weighs 2,620 pounds, the lightest weighing 2,160 pounds.

Franklin production grew gradually from eleven cars in 1902 up to a few more than 1,200 in 1912. Then in 1913 the company decided to build one chassis only, to which all body types were adapted. Such a step made possible more efficient production and increased volume, with a material saving in the manufacturing cost and selling price of the car. The success of this move is best shown by the increase in sales from 1,200 in 1912 to about 4,000 in 1915 and a projected

America's greatest "Light Six"

A car you're proud to own—a car with power and flexibility that no other car of its class can match—a car you can afford to drive because upkeep is so small—that's why the Haynes earned the name AMERICA'S GREATEST "LIGHT SIX."

There's individual beauty and refinement to the Haynes—riding comfort and luxury of appointments.

The engine develops more power than any other of equal bore and stroke—it yields any speed from a mile an hour to a mile a minute on high, with a get-away of 30 miles per hour within 7 1/2 seconds. As to economy—it averages 8,000 miles to the set of tires, 16 to 22 miles to the gallon of gasoline, 400 miles to the quart of oil.

We are now showing the new series models of the Haynes "Light Six"—glad to demonstrate any time you say.

SPECIFICATIONS AND PRICES "LIGHT SIX"

Model 36	
"Light Six" Five-passenger Touring Car	\$1595
Four-passenger Roadster	\$1725
Seven-passenger Touring Car	\$1725
Five-passenger Sedan	\$2250
Seven-passenger Sedan	\$2390
Wire Wheels Extra	F. O. B. Kokomo

All models are completely equipped, including seat covers, moto-meter, ammeter and all accessories.



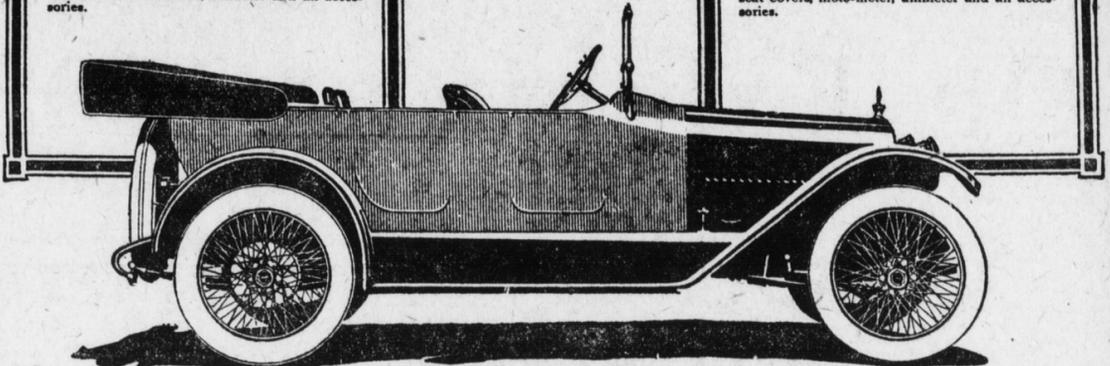
HAYNES

See Them at the Auto Show

Miller Auto Co.

68 S. Cameron St. HARRISBURG, PA.

THE HAYNES AUTOMOBILE CO. KOKOMO, IND.



production of 10,000 cars for the twelve months from July, 1916, to July, 1917.

E. W. Smerk, 107 Market street, is the Franklin distributor for Harrisburg territory.

\$85,000,000 FOR HIGHWAYS SOUNDS TOLL ROADS' KNEEL

Good roads were first maintained in the East, and especially in Pennsylvania, by means of the toll roads, which were separated from the regular roads by means of tollgates, or stations.

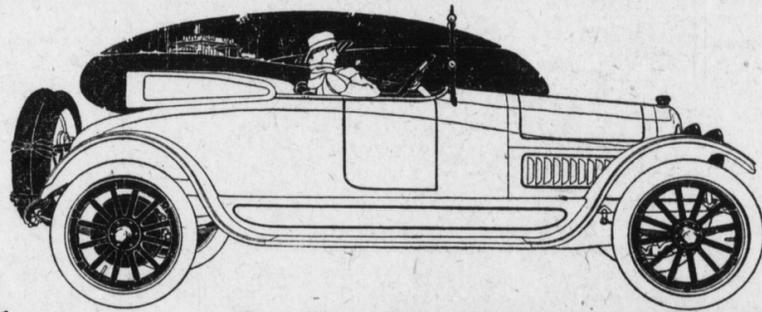
To travel on these improved highways, a charge was made for all sorts of conveyances. With the coming of the motorcar the fee for machines was made so high that in a few years hundreds of miles of good roads were

built and maintained in excellent condition.

There are a few of these roads still in existence, where a toll is charged in the Maryland, Delaware and Pennsylvania sections. Most of these, however, have been eliminated on account of the State highway appropriation and it is expected with the new Federal appropriation of \$85,000,000 these tollgates will be a relic of the past.

PROFITS MILLION A WEEK

The profits of the Ford Motor Company also rambled right along during the last fiscal year, reaching the enormous total of \$59,994,118. The company made 508,000 cars, and sold 472,350. The difference between those sold represents cars at assembling plants, in transit, etc.



The APPERSON Roadplane

Is on the road what the Aeroplane is in the air--Master of the elements

The Roadplane is a motor vehicle in which friction has been reduced to an absolute minimum; in which a perfect mechanism has been provided; in which light weight has been incorporated; a piece of mechanism so perfected, so attuned, that it glides along the road with so little mechanical effort and with such perfect ease that the passengers enjoy the buoyancy of air support. And life air craft, the Roadplane will take you anywhere.

The Apperson Roadplane is the newest self-propelled sensation. It is to road travel what the aeroplane is to the sky and the hydroplane to water. The Roadplane smooths out all roads, banishes for all time all mechanical troubles, and shatters to a hundred fragments all former motor car limitations.

It is a piece of mechanism of such overpowering beauty, accuracy, and quietness of operation, that the Roadplane glides along the road in such a way as to give you the feeling of traveling in the air.

To ride in this new marvel gives you the buoyancy of air support and when at the wheel you unconsciously feel the satisfaction of being master of seventy-mile-an-hour wings.

The Roadplane is made in six and eight-cylinder models, seven-passenger touring and the famous four-passenger Chummy roadster body, being mounted on both chassis. The eight-cylinder model (either touring car or four-passenger roadster) is \$2000. The six-cylinder model (either touring car or four-passenger roadster) is \$1750. 6-cylinder five-passenger \$1690—All prices f. o. b. Kokomo, Ind.

E. L. COWDEN Distributor for Central Penna.

R. J. CHURCH, Sales Manager
108 Market Street

BOTH PHONES

"The Safest Used Car Market in the World"



1916-1, 25 Packard Touring Car, re-painted and guaranteed.	1916 National Touring Car \$600
1916-1, 25 Packard Touring Car, re-painted and guaranteed.	1914 Chalmers Martin Six \$450
1914 Special Pullman Touring Car.	1913 Chalmers \$350
	1913 Cadillac \$350
	2-Ton Norton Truck and Body, \$1200

Packard Motor Car Co. of Philadelphia

Front and Market Sts., Harrisburg, Pa.