



# THE ARROW

THE MAGAZINE OF THE PIERCE-ARROW SOCIETY

## *Adventures in* **ALUMINUM**



The sole survivor of ALCOA's Aluminum experiment in Buffalo visiting the Pierce-Arrow Museum at Gilmore

## *~ About the Cover ~*

**W**ith a weight savings which was as much as 720 lbs., this experimental Series 80 is seen when it was on loan to the Pierce-Arrow Foundation Museum in Hickory Corners, Michigan. “Looking to the past to understand the future may seem counterintuitive but the [Henry Ford] Museum’s collection is so comprehensive, many exhibits show just how forward-thinking industrialists of the past really were. A perfect example is the lightweight Pierce-Arrow from 1925 that’s on display [in Dearborn]. Built in cooperation with aluminum producer ALCOA, virtually the entire car is made of aluminum. The body, engine, transmission, steering and braking hardware are all made from the lightweight alloy. Sixteen of the cars were built, but only one has survived. In the end, aluminum was deemed too expensive for commercial purposes – and while aluminum is regularly used for all these parts and more today, automakers still struggle with its cost.”

~ From autoblog.com

# From the Editor



**Steven Rossi**

The small, unassuming postcard arrived, and read...“Starting in 2021, *Cycle World* magazine will be delivered digitally. There will be four issues a year – completely ad free – and the high-quality editorial mission remains the same as ever. The editorial staff thanks you for your continued support...”

Yet another one bites the dust. What had been a glorious, monthly motorcycle magazine is now reduced to a quarterly e-execution. So it goes when you live by the sword of commercial advertising to sustain your existence. What had been a historically lucrative enterprise has unfortunately evolved into a business model to die for.

Which is why club magazines like *The Arrow* give new meaning to the phrase, “the power of the press.” The Hoosier State Press Association defines such authority as “the ability to mobilize public opinion on matters that are important.”

So, we’re pleased to bring you this second edition of the redesigned *Arrow* in an age where print publications are droppin’ like flies...or, are at least being severely cut back and neutered. Series 21 Model 1 certainly received its fair share of positive response and rest-assured, we’ll continue to tune and tweak the magazine as the calendar unfolds.

If you’re like Liz and me, you’ll certainly relish the warmth and companionship of the glossy stock between these covers...as opposed to yet another, detached and pedestrian computer read. Healthy clubs like the Pierce-Arrow Society have the ability to weather the storm as long as dedicated members like you not only support...but help further...the cause.

Renew your Dues, get involved and join a local Region, attend the Annual Meet - which many of us are preparing for now - step up and volunteer for a PAS Committee, bring in a friend or two as new members, buy from the Company Store, stop by the Hershey tent and donate to the Pierce-Arrow Foundation Museum in Hickory Corners, Michigan.

Because the power of the press will always remain subservient to...the power of the people. Particularly, Pierce-Arrow people...

**Steven Rossi**

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# On the Marque...

by Steven Rossi

## What is it about *Buffalo?*

**As a reader of this magazine, you're well aware that Pierce-Arrow and its heritage is indelibly linked to the city of Buffalo, New York. So much so that the term Buffalo-built is more than just a simple descriptor. In fact, it's an unwavering source of well-earned pride.**

**T**his second-largest city in New York was forged on pioneer spirit and inexhaustible resolve by taking advantage of its unique set of natural resources. It began as an Indian trading point and was chartered as a city in 1832.

Buffalo is situated on the eastern shore of Lake Erie...some 16 miles south of Niagara Falls. The first of many milestones was the removal of sandbars and the creation of a harbor that followed. During the 1820s, Buffalo became the western terminus of the Erie Canal which was formed from Buffalo Creek, and was soon recognized as the Queen City of the Great Lakes. The Canal would go on to stimulate the city's rapid growth by the mid-1800s.

The advantage of the commercial waterway led to improved infrastructure throughout the city. The Jubilee Water Works Company became a public water source for residents in 1829. By 1836, there were 52 miles of refined roads throughout the town, which included a sewerage system...that "gave spirit and force to the culture and its habits."

A lumber trade soon followed because canalboats were available for transport. Rail lines were laid to feed wood from the forest to the Canal. Furniture and cabinet making became a natural outgrowth of the lumber industry...along with ship building, which fueled Great Lakes shipping. The special combination of Lake Erie and the Erie Canal spawned a burgeoning Mill business and turned Buffalo into a leading grain center in America.

As Buffalo matured, then came tanneries and leather works. The city would soon hit its stride after that with the arrival of the steel and iron age. Machine shops, rolling mills and foundries all contributed to the industrialization of the city with the establishment of such companies as Heintz, Pierce and Maunschauer which produced such household items as delicate bird cages and premium ice boxes. Which, of course, evolved into the George N. Pierce Company, and then ultimately, Pierce-Arrow.

Meanwhile, hydroelectric power which was harvested from nearby Niagara Falls turned the town into the "City of Light"...the first American city to enjoy such a widespread use of electricity. So much so, that the distinction...along with the myriad of Lake, Canal and Rail transportation options...attracted the 1901 Pan-American Exposition, which was dramatically illuminated. The arrival of this World Fair provided added encouragement for Pierce to develop its first automobile, the Motorette, and put it on the market...having previously migrated into the bicycle business. Pierce investor George K. Birge was also a Director and an Executive Committee member for the Exposition.

Other automotive entities such as the E.R. Thomas Company (as in the New York-to-Paris winning Thomas Flyer) also built bicycles, motorcycles and automobiles in Buffalo. By 1910, Ford was assembling Model Ts in the Queen City while GM produced Chevrolets there from 1923 through 1941. General Motors also manufactured axles in Buffalo and in nearby Tonawanda, its Powertrain Division established a significant presence. As did Dunlop Tire and Trico for windshield wiper products. Lockport was home to Harrison Radiator and last but not least, all 97 of the small, 1948 Play-boy cars were built in Buffalo.

The meteoric rise of Buffalo was obviously the result of its Buffalonians, who are known to be diligent, trustworthy, strong and decisive. Here's how they describe themselves, according to the knowledge-sharing quora.com website... which serves "to connect the people who have knowledge to the people who need it."

"No. 1 – We are a Midwestern city in the Northeast. As you walk through Buffalo, you might notice that the city feels distinctly Midwestern. We're frequently referred to as a Midwestern city in the North and that holds true not only visually but also, in many ways, culture. We like our share of American food, we have a lot of sports pride and as you may have noticed—we try our very best to be as hospitable as possible to our visitors. We very much enjoy the kind of small-town vibe and as a result, we try to be as personable possible. We recognize that we are not (and never will be) New York City and we love that—we are different from NYC (the King City), but this is a positive thing!"

"No. 2 – People living in Buffalo generally have a lot of Buffalo pride. We have often come from generations of Buffalonians (and frequently refer to ourselves as "the 716" -- our area code). We love the Sabres, love the Bills (sometimes) and love the city. We treasure things like TATS (Thursday at the Square—now in the Harbor), the Taste of Buffalo, a lot of ethnic festivals and Elmwood. These are traditions we really love and therefore, are eager to show our visitors. Buffalo has a lot of culture and history and we are very proud of that. We jump at the chance to earn Buffalo a good reputation as an enjoyable, culturally rich, and interesting place to be and as a result, put in the extra effort to be kind and hospitable (and very, very helpful) to those who have

yet to experience Buffalo fully (and have yet to understand why Buffalo is so great!). We are very low ego, we know we're not the best but we love what we have and that humility is something worth striving for."

Well said.

So, like any other industrial development, Pierce-Arrow was simply a product of the society that created it.

~ SR



**Shelton Square - circa 1908**



**Buffalo Creek inlet - Buffalo, New York**



# FUNFACTS

## about Buffalo

Here are a few fun facts about Buffalo – first known as Buffalo Creek – to round out this little look at Pierce-Arrow's spiritual home



# 1

### It's In The Name

There are two schools of thought about how Buffalo got its name. One is that early explorers observed an abundance of Buffalo along the eastern Lake Erie shore. The other is derived from the French name Beau Fleuve, which means beautiful river.

### The Wright Stuff

# 4

The city is home to the impressive Buffalo Transportation Museum, which obviously

includes an expansive Pierce-Arrow collection ([www.pierce-arrow.com](http://www.pierce-arrow.com)). Most recently, a Frank Lloyd Wright-designed 1927 Filling Station was added within the Museum.



# 6

### Millionaires flowed like water

Between 1860 and 1900 there were more millionaires per capita than any other city in the country. "Millionaires Row" was on Delaware Avenue.

# 10

### Creature comforts

Originally known as the Statler Hotel, the Hotel Buffalo was the first to have a private bathing area in each room.

# 12

### It started here

Buffalo Wings originated in Buffalo at the Anchor Bar, in 1964. They just call them "Wings" there. See [www.anchorbar.com](http://www.anchorbar.com).

# 13

### Snow Balls banned?

Despite the pronounced tendency for Lake-effect snow, city law prohibits the throwing of snowballs...except in designated areas.

### Great Arrow Ghosts

The four story Pierce-Arrow factory still exists at 255 Great Arrow Avenue, between Elmwood and Delaware and continues to serve the community. It's been subdivided into a multi-tenant office and warehouse space which now goes by the name of Pierce Arrow Commerce Park ([www.piercearrowcp.com](http://www.piercearrowcp.com)). And there's a move afoot to repurpose the original three-story Administration Building at 1695 Elmwood Avenue...which was designed by Albert Kahn...into luxury Lofts ([www.piercearrowloft.com](http://www.piercearrowloft.com)). The complex was listed on the National Register of Historic Places in 1974.

# 11



# 2

### Buffalo Big

When the Ellicott Square Building was completed in 1896, it was the largest office building in the world. In 1896 and 1897, the building was the site of Edisionia Hall and the Vitascope Theater, the earliest known dedicated motion picture theater in the world

### Cup 'o Joe

Non-dairy creamer, whipped topping and instant coffee came from Buffalo.

# 9

### Mother of Invention

Among other inventions, the grain elevator, the air conditioner, the heart pacemaker, the first cancer research lab and child daycare originated in Buffalo...and so did the Electric Chair.



# 3

### Neighbors

There are four Canadian border crossings in the Buffalo-Niagara Falls area.



# 8

### Cheerio!

As the aroma of chocolate used to be prevalent throughout Hershey, Pennsylvania, the scent of breakfast cereal permeates Buffalo...from General Mills' East Coast Cheerios plant.



# 14

### Old brews is new news

A cluster of abandoned grain elevators have been transformed into a 10-story, six-pack of Labatt Blue beer cans on the water-front, as part of the Buffalo RiverWorks ([www.buffaloriverworks.com](http://www.buffaloriverworks.com)) brewery, entertainment and recreation center.

# 15

**Buffalo-born PAS members** are known to congregate at Annual Meets...to fondly reminisce. So, like any other industrial development, Pierce-Arrow was simply a product of the society that created it.

# 5

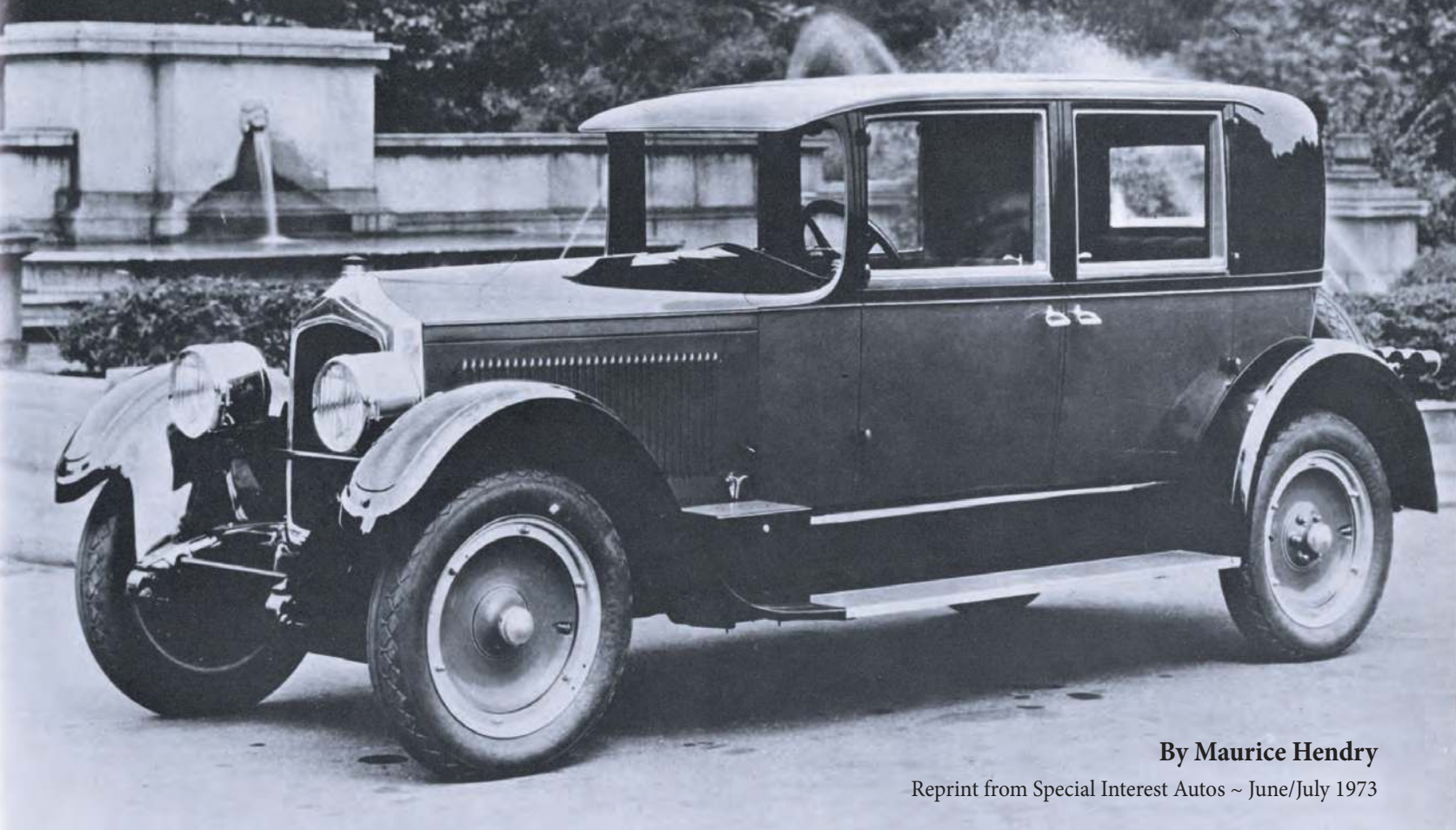
### And we'll dance by the light of the moon

The minstrel song *Buffalo gals won't you come out tonight, come out tonight* was written in 1844 "in reference to the many dancing girls who performed in the bars, concert-hall dives and brothels in the city's Canal district, where canal and freighter crewmen received their wages" according to *Canal Street, Buffalo — The Wickedest Street In The World*.



# ALUMINUM

## HEAVYWEIGHTS



By Maurice Hendry

Reprint from Special Interest Autos ~ June/July 1973

### Alcoa and Pierce-Arrow teamed up to build lightweight prototypes that ended up too heavy.

While Aluminum helped lighten cars from the 1890s on, the first serious attempt at an “all-aluminum” car was made in 1919 by the Aluminum Company of America (now Alcoa). The project originated with a casual remark by the British engineer Laurence H. Pomeroy.

Pomeroy, visiting the Alcoa plant at Cleveland, had watched aluminum connecting rods being forged for the Dodge car. Since the con rod is one of the more highly stressed components in an automobile, Pomeroy remarked to Alcoa president A.V. Davis, “If you can make aluminum rods, you can make an aluminum car.” Taking him at his word, Davis invited Pomeroy to prepare a design. Alcoa at that time was especially anxious to build an all-aluminum demonstration car so the auto industry might take notice and make use of its WW-I expanded Lynite facilities. The Lynite people wanted peacetime projects and realized that “seeing is believing” was the only way to convince Detroit.

Two distinct designs followed and were built successively – first a 4-cylinder series under the Alcoa banner, then a series of 6s produced in conjunction with Pierce-Arrow. Six 4-cylinder cars were built, while the 6s numbered 10 or 12.

Alcoa’s first 4-cylinder cars used an L-head,  $4 \frac{1}{8} \times 4 \frac{1}{4}$  engine of 245 cid. The engine’s design was “standard American,” but the use of metals other than aluminum was deliberately kept as low as possible – to about 15%. The engine’s detachable head, block, crankcase, bellhousing, and oil pan were all aluminum. The block had cast-iron valve seats, valve guides, and cylinder sleeves. Aluminum was used for pistons, timing gears, water pump, and other items customarily made of iron. Crankshaft, camshaft, and valves were steel. The radiator had a copper core with aluminum tanks and shell.

While the multiplate clutch had alternate steel and copper discs, the driving and driven members were aluminum, as were the pedals and linkage. The transmission gearcase and shifting forks were aluminum, but the gears were steel. Torque tube, U-joint house, radius rods, and rear-axle housing were in light alloy, along with the chassis frame. The frame, in fact, was cast aluminum, but it did have two of its five crossmembers in steel – the end two. Springs were steel, with aluminum shackles. Other aluminum parts included brake shoes and drums, wheel hubs and discs, brake levers, rod brackets, Pitman arm, drag link, and tire rod.



Alcoa built four body types: a 4-seater tourer, 2-seater coupe, 4-door sedan, and roadster, all bodywork being in the light alloy. The tourer weighed 2400 pounds, the coupe 2700. Bodies used mainly aluminum castings from the firewall back, including cowl, doors, pillars, and roof. Body framing was cast into the aluminum panels, and the bodies used no wood. Fenders, hood, and radiator shell were of aluminum sheet. All castings were gas welded, but, in addition, a lot of screw and rivet fastenings were used. The gas tank, which was also aluminum, probably had gas-welded seams.

Tests with these 4-cylinder Alcoa cars looked so promising that in 1923, Pierce-Arrow was brought into the project to build the 6-cylinder series. Pierce was chosen because it had already used great quantities of aluminum since 1904, both in its bodies and running gear. Then, too, P-A was known for its regardless-of-cost thinking. The company's small size and independence simplified work on such a special project. Finally, Alcoa had taken over the American Body Co. of Buffalo, N.Y. about this time, and this gave added reason to produce experimental aluminum bodies.

Principals in the project were: S.K. Colby of the American Body Co., overall director; L.H. Pomeroy, engine and chassis design; John S. Burdick, body design; A.P. Richmond and Charles A. Bradley, assistant engineers. S.K. Colby reported to

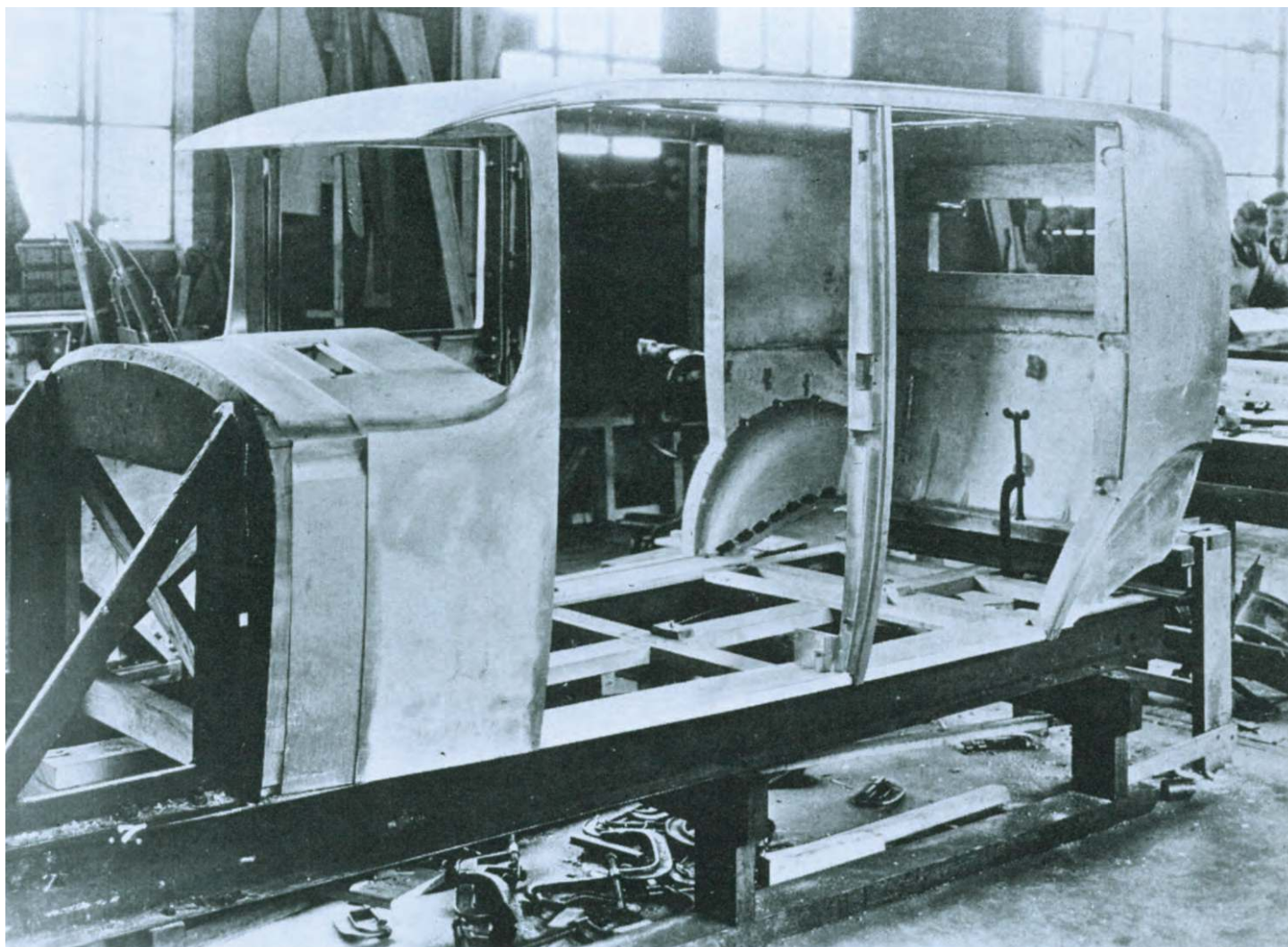
Roy A. Hunt of Alcoa's Pittsburgh office.

The 6-cylinder cars were built in two series: Experimental 232 and Experimental 232-A. The aim was to get a comparison between these cars and the Pierce-Arrow 80 then in actual production. The 232-A was an 80 design built in aluminum, with Pomeroy engine and drivetrain. The 232 used the same Pomeroy engine and rear axle, but its chassis was of completely original design. Differences lay in front axles, front spring shackles, brake equalization system, torque tube or arm drive, disc wheels, and radiator and hood design. Comparative specifications appear in the chart on page 10.

The 232 and 232-A had the following aluminum components, which made up about 85% of total metal content: body, frame, engine block, head, crankcase, intake manifold, timing-gear cover, pistons, rods, clutch cover, front axle, rear-axle housing, brake drums, wheels, most of the steering apparatus, and most of the braking system.

The 232-A and 80 had wooden wheels, but metal parts on the 232-A were aluminum, hence the weight reduction. The 232's forged aluminum disc wheels contained integral brake drums, making them very stiff, yet light. A report claimed them to be the lightest wheel/brake/hub configuration ever made.

Alcoa's Roy Hunt, however, expressed disappointment to



*Bodies for 6s used big castings for cowl, doors, pillars, and roof - all gas-welded together. The experiment proved unsuccessful when aluminum cars saved only 720 pounds over steel counterparts. Photos from Maurice Platt*



Mr. Colby over the relatively meager weight reduction that a resulted. The overall saving in the complete 5-passenger sedan was only 720 pounds, a trifling amount considering the cost and comprehensiveness of the program and the much-touted advantages of aluminum. "I had supposed it would be a much larger percentage," wrote Hunt in a letter dated October 5, 1926. "I don't see how you are going to make much of a claim for saving on the [basis of] weight alone."

Yet the engine weighed 452 pounds total, or six pounds per bhp compared with the 8-10 pounds per bhp of cast-iron, non-Pomeroy engines. The frame represented Pomeroy's biggest headaches after he failed to get an all-aluminum radiator. The pressed aluminum frame was one of the last parts resolved and was far more successful than the cast, sectional frame of the 4-cylinder series.

What became of these aluminum cars? Data is fragmentary and contradictory, but the following appears to be reasonably certain: First, of the 4-cylinder cars built in 1920 – the touring was used constantly until November 1928. It had run up 226,989 miles in eight years, after which it was dismantled and an extensive report written on all aluminum parts. Conclusion: moderate wear. The only cracks were at holes drilled for later use and modification. The coupe also ran until November 1928 but saw considerably less use and logged only 149,000 miles. It was dead-stored until 1930 before teardown and also showed only moderate wear. The roadster was scrapped in 1932 at 77,832 miles.

As to the 6-cylinder series, one ran 100,000 miles, then was torn down and examined. A 5-passenger sedan saw several owners and drivers over an extended period, the last being George J. Stanley of Cleveland. Two 7-passenger sedans were built and owned by A.W. and R.B. Mellon. No data are available on either one.

Alcoa's president, V. Davis, owned and drove two aluminum sedans, a 4 and a 6. He eventually asked Henry Ford whether he would accept the 6-cylinder car for his Greenfield Village museum. Ford was overjoyed and said he felt like dancing. When Davis finally handed the car over to the Ford Museum in 1944, old Henry at first couldn't be found. Eventually he was located on the river bank, whittling. After accepting the car, Ford called out his square-dance band (always close at hand in the engineering department at HF's order) and again asked Davis to dance. Davis declined, so Benson Ford finally danced with Henry. This car, still at the Ford Museum, seems to be the sole survivor.

What did these aluminum cars prove? Were they total failures? Not really. Technically, all were quite successful and ran up big mileages in a variety of usages, with very little trouble. Pierce-Arrow profited when, in the fall of 1926, P-A's chief engineer, Charles Sheppy, began work on an improved Pierce 80 know as the Series 81. This had a heavier crankshaft, aluminum pistons/rods/cylinder head. Power went from 70bhp to 75 at 3200 rpm. Performance similarly increased, yet the 81 engine was smoother and quieter. All this came from experience with the aluminum engines, which contained improved valve gear, greater refinement, and better rpm capabilities. The Pierce

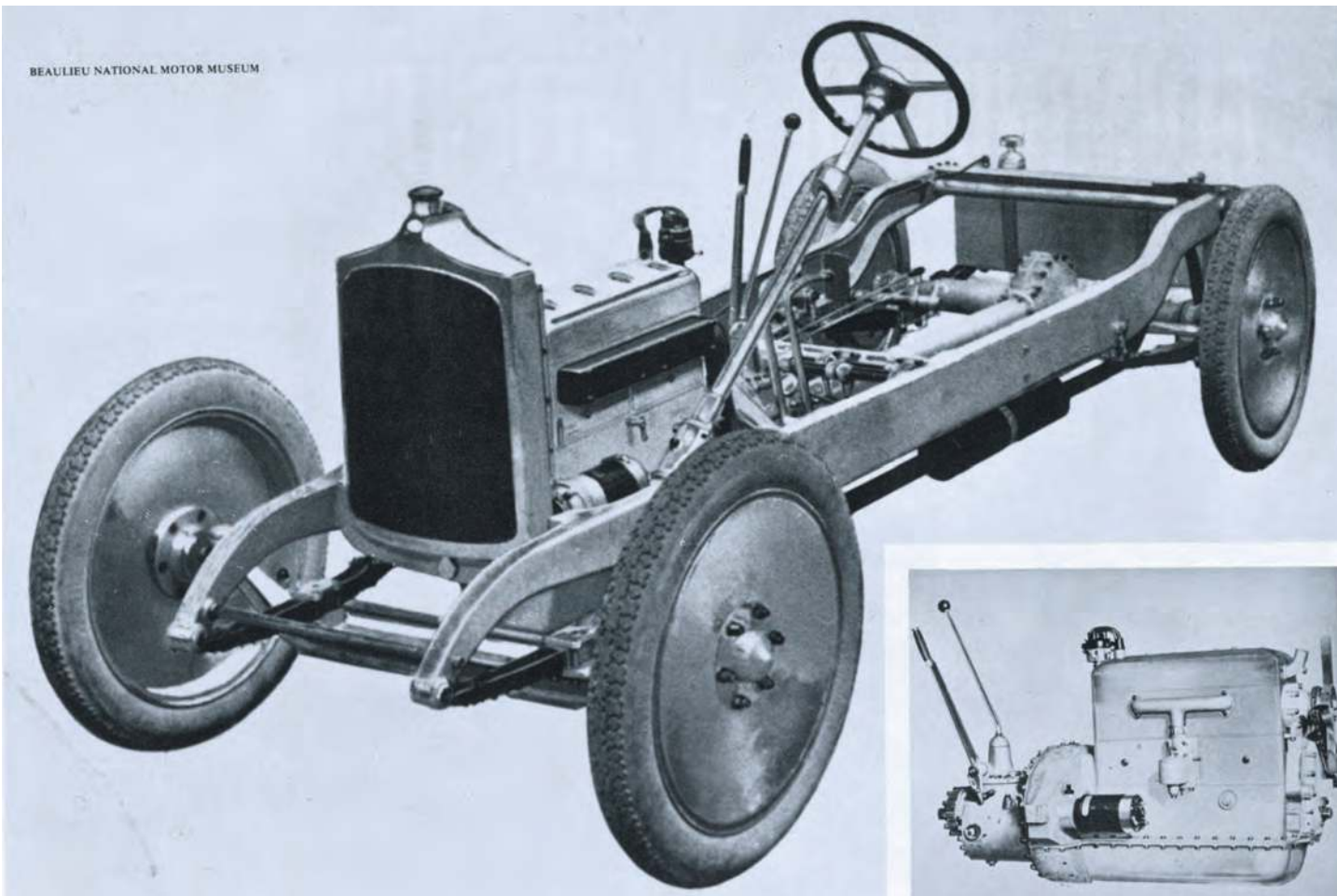


experimental department also used these cars as guinea pigs in areas not directly related to aluminum construction, notably in steering and braking layouts.

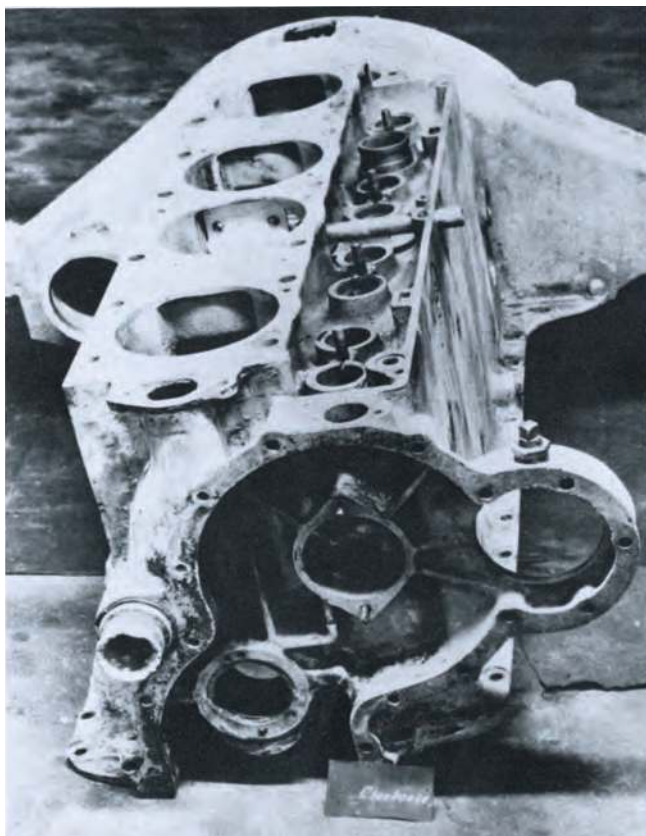
The main reasons these cars never saw production included the limited supply of commercial aluminum at that time. This meant a high cost for what Roy Hunt pointed out wasn't by any means so substantial a weight reduction as he expected. Furthermore, since Alcoa had virtually complete control over aluminum supplies at that time, a change to alloy construction would have put any auto manufacturer into the hands of another company so far as prices and policy were concerned. Finally, the demand, then as now, was for lower cost, not lightweight, and today, in 1973, we seem no nearer an aluminum car than we were then.

Our thanks to Bernard J. Weis of the Pierce-Arrow Society, 135 Edgerton St., Rochester, N.Y. 14607; Maurice Platt; Marshall B. Johnson; Les Henry of the Henry Ford Museum, Dearborn, Mich.; and Alcoa, Pittsburgh.

*About the author: Maurice Hendry started writing about cars as a hobby 20 years ago. He took the engineering course at Timaru Technical Institute in New Zealand, passed his exams in 1947, and has been a professional engineering draftsman ever since. He's a registered engineering associate and a member of the New Zealand Institutes of Daughtsmen, whose official seal he designed. Hendry's articles and books have been published by 12 publishers in five countries. His wife, Marion, is a science teacher and plays a considerable role in his writing activities. Among other things, the Hendrys have two delightful children and the only 12-cylinder Pierce in New Zealand.*



Alcoa's first all-aluminum chassis of 1919 used Pomeroy-designed 4 (inset). Even the wheels, brakes, gas tank, and cast frame were in the light metal.



Pomeroy's aluminum block for 4-cylinder series used iron sleeves and valve inserts. Later 6s also used Pomeroy engines along similar lines.

#### The Alcoa-Pierces, Vital Statistics

	Pierce 80	232	232-A
Number of cyls.	6	6	6
Bore & stroke, in.	3.5 x 5.0	3.25 x 5.0	3.25 x 5.0
Displ., cid	288.6	248.9	248.9
Bhp @ rpm	65 @ 2700	75 @ 3000	75 @ 3000
Differential	4.45:1	4.45:1	4.45:1
Tires	32 x 5.77	33 x 6.00	33 x 6.00
Wheelbase, in.	130	133	133
Curb weight, sed.	3730 lb.	3010 lb.	3130 lb.
Engine weight	613 lb.	452 lb.	452 lb.
Rear axle weight	506 lb.	343 lb.	346 lb.
4 wheels weight	264 lb.	103 lb.	172 lb.



L.H. Pomeroy, at wheel, takes friends for rides in unfinished chassis around 1920. Four 4-cylinder cars and a dozen 6s were eventually made.



**A**s mentioned by Maurice Hendry in the previous *Special-Interest Autos* article from 1973, Alcoa turned to Pierce-Arrow when it came time to experiment with six-cylinder alternatives after previous, 4-cylinder tests proved positive. “Pierce was chosen because it had already used great quantities of aluminum since 1904, both in its bodies and running gear. Then, too, P[ierce]-A[rrow] was known for its regardless-of-cost thinking.” Pierce-Arrow was famous for its early, cast aluminum bodies.

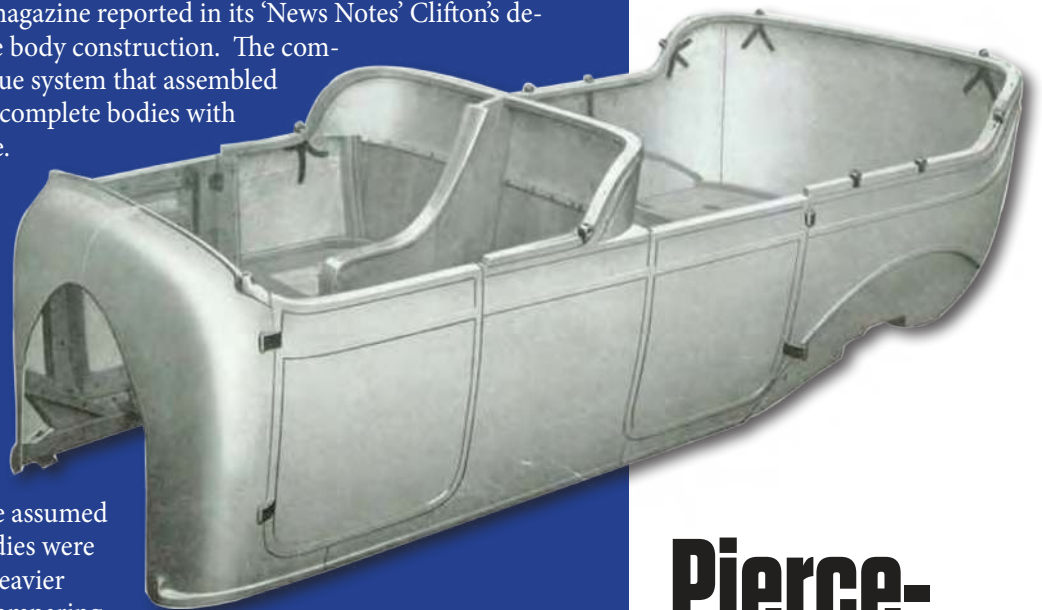
In the words of the Aluminum Anodizers Council™, “Pierce-Arrow bodies were cast for several years - from 1912 until 1917 or 1918. The cast bodies were enormous sand castings and were often welded as part of the assembly process. The casting thickness was between 1/4 and 1/8 in. thick, and the bodies were of good appearance, durable and structurally sound.”

And here’s what *Automobile Topics* had to say about the subject, back on September 12, 1909. The magazine reported in its ‘News Notes’ Clifton’s defense of Pierce’s automobile body construction. The company had developed a unique system that assembled cast aluminum panels into complete bodies with no major wooden structure.

This advanced idea originated with James R. Way, Pierce’s body engineer and designer, who had been trained at Brewster & Company, New York City carriage and body builder. The George N. Pierce Co. hired 42-year old Way in 1904. Clifton remarked that many people assumed that the cast aluminum bodies were “several hundred pounds heavier than competing bodies.” Comparing overall weights of seven passenger cars “embodying Pullman seats,” he asserted the Pierce body weighed only 40 or 50 pounds more if a wooden body was equally well made. Clifton did not believe the body of metal on a wood frame (which became known as the “composite body”) was comparable, either. He insisted that with the additional wood reinforcement, the sheet metal required gave no great advantage in weight for the metal-paneled body, “but in the point of durability and safety for the riders, from the point of liability for personal injury, our body is certainly not to be compared to any other body made anywhere in the world.” Observing Pierce bodies involved in accidents showed “the cast aluminum body seems to be of such a character that they do not crush or collapse, and consequently save from serious injury their occupants.” The Pierce Company continued to develop its cast aluminum bodies for more than another decade with great success.

*From Charles Clifton of Pierce-Arrow:  
A Sure Hand And A Fine Automobile*  
by Roger J. Sherman  
McFarland & Company, 2019

*Editor’s Note: Also remember that while Pierce enjoyed excellent, aluminum experience on Elmwood Avenue in Buffalo, it would never attain significant stamping capability at that site...which further contributed to the company’s consideration for cast aluminum bodies. ~SR*



## But What About

## Pierce- Arrow’s Own Aluminum Body?

# Registration and Insurance for a used Pierce-Arrow in 1938

40-5349

## AUTOMOBILE POLICY

Expires JULY 1ST, 1939


Automobile 1931-PIERCE-ARROW CONVERTIBLE COUPE

Amount, \$ 180.00 Premium, \$ 6.00

Assured FRED P. HANSEN, JR.

No. A **481631**

### THE LONDON ASSURANCE



UNITED STATES BRANCH  
NEW YORK, N. Y.

W. A. ALEXANDER & COMPANY  
135 South La Salle Street, Chicago, Illinois - Phone: Franklin 7300

E. J. RILEY.

PLEASE READ YOUR POLICY A62256

5-38

JUL-6-38 849926 •1-176-236

Name of Owner FRED PHANSEN JR. P 513  
(Type or Print Full Name)

Street Address 700 So. GROVE AVE

City or Town OAK PARK County COOK

Name of Car PIERCE-ARROW Style CONV. COUPE Year 1931

Factory No. 2525272 Engine No. 325366

Model 20 No. and Bore of Cyl. 20-108 Horse 10

WRITTEN SIGNATURE of Owner Fred P. Hansen Jr.

**1938** STATE OF ILLINOIS  
LICENSE PLATES bearing above number are assigned to  
owner for motor vehicle described for year ending Dec  
EDWARD J. HUGHES, Secretary

1938 Vehicle Registration Card

In *Series 20 - Model 3 of The Arrow*, former Editor Roger Sherman presented original documentation for a second-hand Pierce-Arrow in a short feature entitled *Bill of Sale for a Used Pierce-Arrow in 1938*. Obviously, the transaction took place in 1938. Well...with Roger having shared the period Sales Agreement...we thought it was only fitting to now provide examples of a Registration and Proof of Insurance from 1938 as well!

On June 13<sup>th</sup>, 1938, Mrs. P. H. Gray bought a 1930 Pierce-Arrow from New York's Huntoon & Raffo agency (see page 27, Issue 20 - 3). She paid \$250 for the nine-year-old Seven Passenger Touring car, according to the "Agreement and Bill of Sale," and took it home to New Haven, Connecticut. Per Roger Sherman, it sold for \$4,106 new and still exists up in Greensboro, Vermont with owner and PAS member Clive Gray.

Meanwhile, on July 5, 1938, Fred P. Hansen, Jr. of Oak Park, Illinois entered into an Agreement with the United States Branch of the London Assurance company to insure a 1931 Pierce-Arrow Convertible Coupe (Serial Number 2525272, Engine Number 325366) which was valued at just \$180. The annual premium at the time was a mere...\$6.00...with coverage for "pleasure & business." The car was Registered in Cook County on July 6, 1938.

Unfortunately, Mr. Hansen's Convertible Coupe does not appear in the current PAS Vehicle Register (at the rear of the 2021 Roster). Though apparently, he chose wisely for his insurance needs. Britain's London Assurance was founded in 1720. Marine coverage was their early specialty because they were big proponents in expanding English services into foreign trade zones. They were represented in Chicago by W.A. Alexander & Company.

So in the words of broadcaster Paul Harvey, "now you know the rest of the story" when it came to Pierce-Arrow ownership in 1938.



Built in 1914, this Arts and Crafts Bungalow in Oak Park, Illinois was home to Fred P. Hansen, Jr. and his 1931 Pierce-Arrow Convertible Coupe.



## AUTOMOBILE POLICY

No. A 481631

STOCK COMPANY

## THE LONDON ASSURANCE

UNITED STATES BRANCH  
NEW YORK, N. Y.

## In Consideration of the Premium Hereinafter Mentioned, Does Insure

A The Assured named herein, for the term herein specified, to an amount not exceeding the actual cash value of the property at the time any loss or damage occurs, nor, in any event, the limits of liability, if any, herein specified, against direct loss or damage from the perils specifically insured against herein to the automobile herein described and the equipment usually attached thereto, only while within the limits of the United States (exclusive of Alaska, the Hawaiian, Philippine and Virgin Islands and Porto Rico) and Canada, including while on coastwise steamer between ports within said limits.

## B NAME OF ASSURED

FRED P. HANSEN, JR.,

## ADDRESS OF ASSURED

700 SOUTH GROVE AVENUE, OAK PARK, ILLINOIS.

Subject to all the provisions, exclusions, conditions and warranties contained in this policy, loss, if any, payable, as interest may appear, to Assured and

Address

TERM OF POLICY: From JULY 1ST, 1938 noon To JULY 1ST, 1939 noon.

C This insurance is against only such and so many of the Perils named in the Schedule below as are indicated by a specific premium in writing set opposite thereto. The limit of this Company's liability against each of such Perils shall be as stated in the General Conditions of this policy, not exceeding, however, the limits stated in said Schedule.

PERILS as defined on Page 2 in the following Paragraphs	LIMIT OF LIABILITY	NET RATES	PREMIUMS
1. COMPREHENSIVE COVERAGE, EXCLUDING COLLISION OR UPSET F	\$ 180.00	\$	\$ 6.00
	Actual Cash Value		
2. COLLISION OR UPSET G	In Excess of \$	Deductible	\$
3. CONVERTIBLE COLLISION OR UPSET (Convertible Additional Payment \$ ) H	Actual Cash Value		\$
4. TOWING AND ROAD SERVICE EXPENSE J	\$10.00 on any one claim		\$
5. TOWING AND EMERGENCY SERVICE EXPENSE K	\$10.00 on any one claim		\$
6. PERSONAL EFFECTS (FIRE, LIGHTNING AND TRANSPORTATION ONLY) L	\$	\$	\$
7. FIRE, LIGHTNING AND TRANSPORTATION M	\$	\$	\$
8. THEFT, ROBBERY AND PILFERAGE N	\$	\$	\$
Insert "Broad" or "Deductible" (If additional premium required for Broad Theft, insert here.)			\$
9. TORNADO, CYCLONE, WINDSTORM, HAIL, EARTHQUAKE, EXPLOSION AND WATER DAMAGE O	\$	\$	\$
10. SPECIAL COMBINED ADDITIONAL COVERAGE P	\$	\$	\$
11.	\$	\$	\$
TOTAL PREMIUM			\$ 6.00

## D WARRANTED BY THE ASSURED

1. Assured's occupation or business is \_\_\_\_\_ Nationality and/or Race \_\_\_\_\_  
 2. Employer's name and address \_\_\_\_\_  
 3. The description of the automobile and the facts respecting its purchase are as follows:

Year Model	Trade Name	Type of Body (Give Truck Tonnage)	Serial Number and Motor Number	No. of Cyls. and Model	Factory List Price	Actual Cost To Assured (Including Equipment)	Purchased by Assured Month Year New or 2nd Hand
1931	PIERCE ARROW	CONVERTIBLE COUPE	S 2525272 M 325366	Cyls. Mdl.		\$180.	JUNE 1938-S.H.

4. The automobile described is and will be used for the following purposes only: PLEASURE & BUSINESS  
 5. The automobile described is usually kept in PUBLIC OR PRIVATE garage, located OAK PARK, ILLINOIS  
 6. The automobile described is fully paid for by the Assured and there is no Lien, Mortgage or other Encumbrance thereon, except as follows: NO EXCEPTIONS  
 If purchased on a deferred payment plan, the amount unpaid is \$ \_\_\_\_\_, represented by \_\_\_\_\_ Notes of \$ \_\_\_\_\_ each. Due date of final note is 19 \_\_\_\_\_.

E This policy is made and accepted subject to the provisions, exclusions, conditions and warranties set forth herein or endorsed hereon, and upon acceptance of this policy the Assured agrees that its terms embody all agreements then existing between himself and this Company or any of its agents relating to the insurance described herein, and no officer, agent or other representative of this Company shall have power to waive any of the terms of this policy unless such waiver be written upon or attached hereto; nor shall any privilege or permission affecting the insurance under this policy exist or be claimed by the Assured unless so written or attached. This policy shall be void in event of violation by the Assured of any agreement, condition or warranty contained herein or in any rider now or hereafter attached hereto.

IN WITNESS WHEREOF, this Company has executed and attested these presents; but this policy shall not be valid unless countersigned by a duly authorized agent of this Company.

*W. A. Alexander*  
 United States Manager

Countersigned at CHICAGO, ILLINOIS

this 5TH day of JULY 19 38

W. A. ALEXANDER &amp; COMPANY

BY:

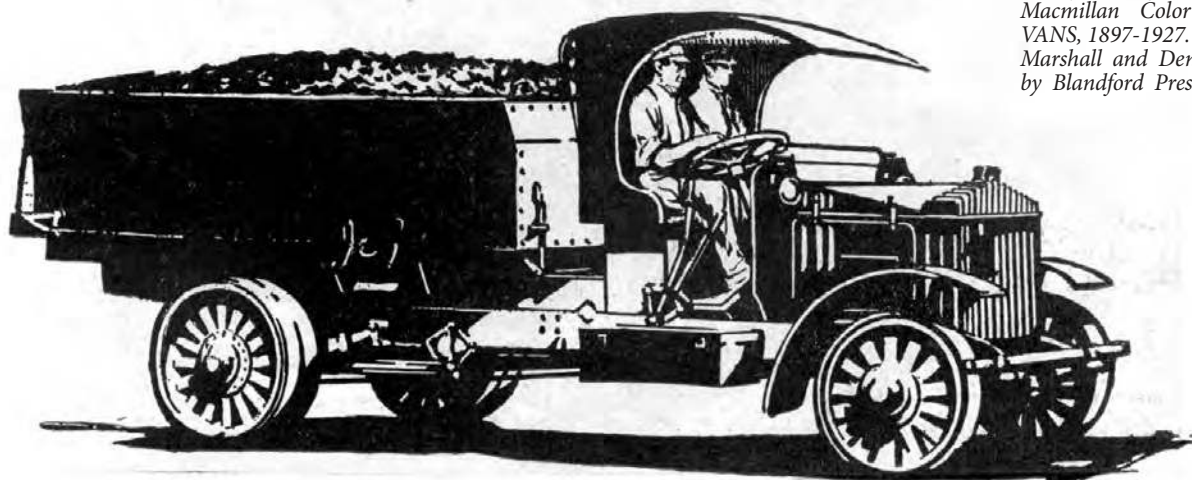
Agent.

This Policy Is Subject To The ADDITIONAL CONDITIONS Printed On Reverse Hereof

7-5-38-1K

# A Little Look at the **BIG** Pierce-Arrow TRUCK

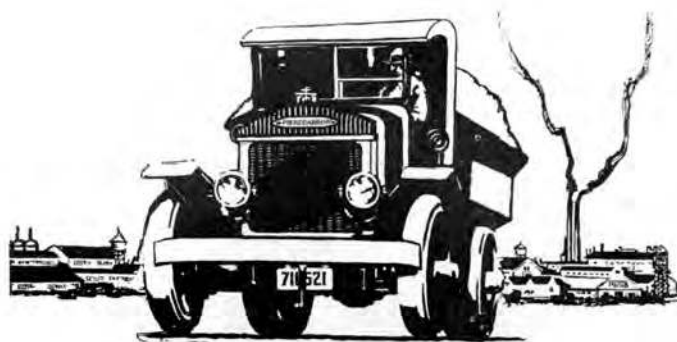
*The following is an excerpt from the Macmillan Color Series: TRUCK AND VANS, 1897-1927. It was compiled by Prince Marshall and Denis Bishop, and published by Blandford Press Ltd., London, in 1972.*



The history of the truck is one of a triumph over prejudice and oppression. But despite the fact that the odds have been stacked against it, that it has had no chance to develop its full potential, the truck has seized the lion's share of inland traffic and shows no sign of letting go. It needs only the simplest of permanent ways, a mere strip of hard going with some friction, to connect a farm or a quarry or a mine or a dock or a forest into a transportation which embraces all our markets and stretches throughout the land.

The truck can tolerate failure, because the driver can adapt to changing conditions. It does not need a traffic control system – the driver finds his own way. The capital charges in trucking are low. The costs are largely wages and fuel and tyres and repairs. Since trucks are replaced in a few short years, new ideas spread rapidly.

As a result, the truck's engineering design is the liberal art. Every engineer has his own way of solving problem, and every way is right. In free competition improvement is the name of the game; it is the nature of intelligent life. The advantage of the truck is that it exploits the power of the intellect to change, to learn, to progress.



**“ They find it  
pays to buy  
better trucks. ”**



# One Hundred Million Dollars

Eleven years ago when the Truck Industry was young, The Pierce-Arrow Motor Car Company built and sold 50 trucks. The performance of those 50 original Pierce-Arrow Trucks is a matter of definite scientific record. Forty-four are in active service to-day.\* From this auspicious beginning, the demand for Pierce-Arrow Trucks has increased and multiplied until now more than \$100,000,000.00 worth of Pierce-Arrow Trucks have been built and sold. Pierce-Arrow Trucks are proved money-makers in many industries and trades—one hundred and seventy-four in all. No matter what commodities you wish to haul, no matter what the road or traffic conditions may be in your locality, The Pierce-Arrow Motor Car Company can give you definite information covering your problem.

THE PIERCE-ARROW MOTOR CAR COMPANY  
Buffalo, New York

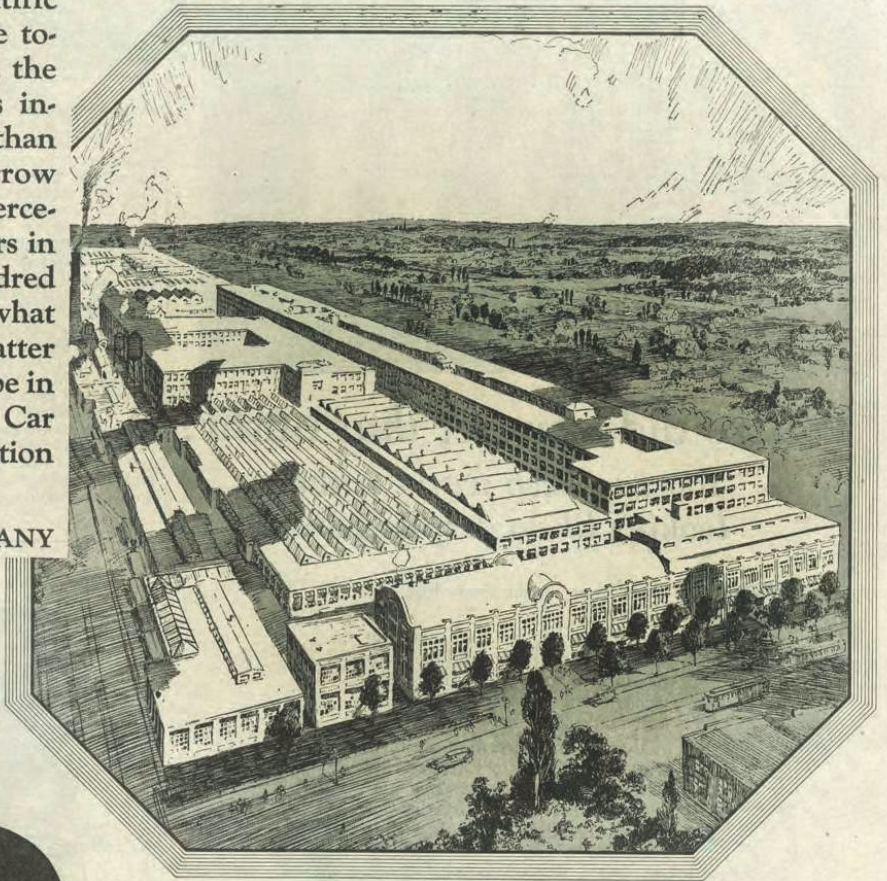
\*Of the original 50 Pierce-Arrow Trucks built in 1911, two are retired from service; two are unaccounted for; and two were destroyed by fire

## Chassis Prices:

2-Ton . . . .	\$3,200
3½-Ton . . . .	4,350
5-Ton . . . .	4,850

F. O. B. Buffalo

Prices in Canada upon application



The Pierce-Arrow Plant, one of the most modern factories in the world, occupying 88½ acres, contains 1,500,000 sq. ft. floor space.

# Pierce Arrow

## MOTOR TRUCKS



1911 was perhaps a landmark in the history of the truck for it was the year in which there were signs of a significant gain over public prejudice. In Boston, Massachusetts, plans were put forward to exclude the horse entirely from certain streets. At last it was realized that horses were not only responsible for congestion but were a hazard to public health. Foul streets, blow-flies and dirt in shops were all directly attributable to the horse. In Maine, proposals went even further; entire streets would be devoted solely to the motor truck or trolley-car. Yet it appeared that the insurance companies were still dragging behind public thinking. They insisted on an added premium of 50% if gasoline trucks entered steamship or railroad wharves.

It was in 1911, too, that the famous luxury automobile company, Pierce-Arrow, whose long history included bird-cage and bicycle manufacture, decided to enter the truck market. This entry heralded a new trend for the American truck. Pierce-Arrow brought to the market another European trait, the overslung worm rear axle in a 5-tonner. Until now, live axles had been confined to the lighter range of commercials. Overhead worm allowed the whole reduction to be done in one stage, instead of part in the right-angle drive and part in the chain, and of course, it was quieter and more substantial.

And so began another round of debates. Chains were lighter, cheaper, gave better ground clearance and reduced the deadweight, it was reasoned. Arguments aside, other manufacturers were quick to copy Pierce-Arrow, though many Americans were convinced that the worm added to the deadweight and this increased the popularity of the Torbensen system in the States.

The Pierce-Arrow truck division was set up under the direction of two brilliant engineers, H.K. Thomas and John Younger. A prototype cab-over-engine model did a grueling 10-day test over most New York and Pennsylvania state roads before production began. This prototype showed up many weaknesses in design, particularly having the cab over the engine, which made Pierce opt for the new vogue in bonneted design.

The first sale was to the International Brewing Corporation. This truck attracted immediate renown by travelling, fully loaded, from New York to Boston (231 miles) in 20 hours. In 1918, the same truck was still working for International Brewing, having covered 130,000-odd miles to its credit. Pierce thought it a good publicity stunt if it could do the same New York to Boston journey once again. It did. This time in 18 hours, 7 minutes. To top this achievement, the driver lost his way, adding some minutes to the journey, and nine miles had been added to the route by the introduction of a detour!

Within a couple of years of this first truck having left the factory, Pierce had made themselves a

name in the trucking industry equal to that in the automobile world.

After war broke out in Europe, Pierce truck sales increased still further by the demand from British hauliers unable to buy enough home-built trucks. In Britain at that time they were expensive, but even so they sold well.

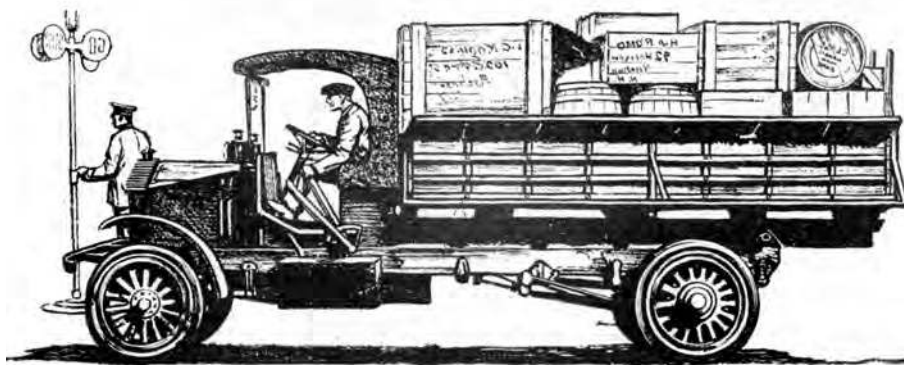
They were also liked by the French and British armies and when the United States entered the war, record numbers were built -- over 7,000 just for the year 1918.

The anti-climax was swift. Things had changed with the war. Many of Pierce's affluent customers had gone forever -- the extravagant Pierce 66 that gobbled up a gallon of petrol every four miles was 'out' with the new generation, as was the glitter that went hand in glove with Pierce. What's more, the balance sheets were also fading and a new post-war management had none of the pre-war grace. They were bankers -- there for the short-term profit. They were last of all car or engineering men. Even the old personnel fell, one by one, by the wayside.

One 'old school' engineer, Francis Davis, was now to be found as Chief Engineer of the truck plant. Davis had served in that section since its inception and, in fact, drive-tested the prototype. Writer Maurice Hendry credits him with having invented power steering in later years, although Davis said he first realised the need whilst driving the prototype.

Sales continued to slip at Pierce, particularly on the truck side, which never regained its former eminence, despite many 'new' variations of the original design. A 2, 2 ½, 3, 3 ½, 4, 5 and 6 ½-ton range made up the catalogue -- whilst 4-speed replaced the old 3-speed gearboxes. The 38 hp T-head engine remained basic until 1924 when Pierce announced a 6-cylinder dual valve engine in a drop-frame bus chassis that was also sold as a fire truck and intercity freight van.

Two years later the less costly Series 80 car units were used in the make-up of a new 'Fleet Arrow' line of trucks powered by a 6-cylinder L-head engine. Sales of the 'Fleet Arrow' and dual valve models were low. None of the post-war offerings gave Pierce-Arrow back their world status and by 1927 the Pierce name as builders of trucks had really started to become just another legend."





# The Pierce-Arrow WORM GEAR DRIVE

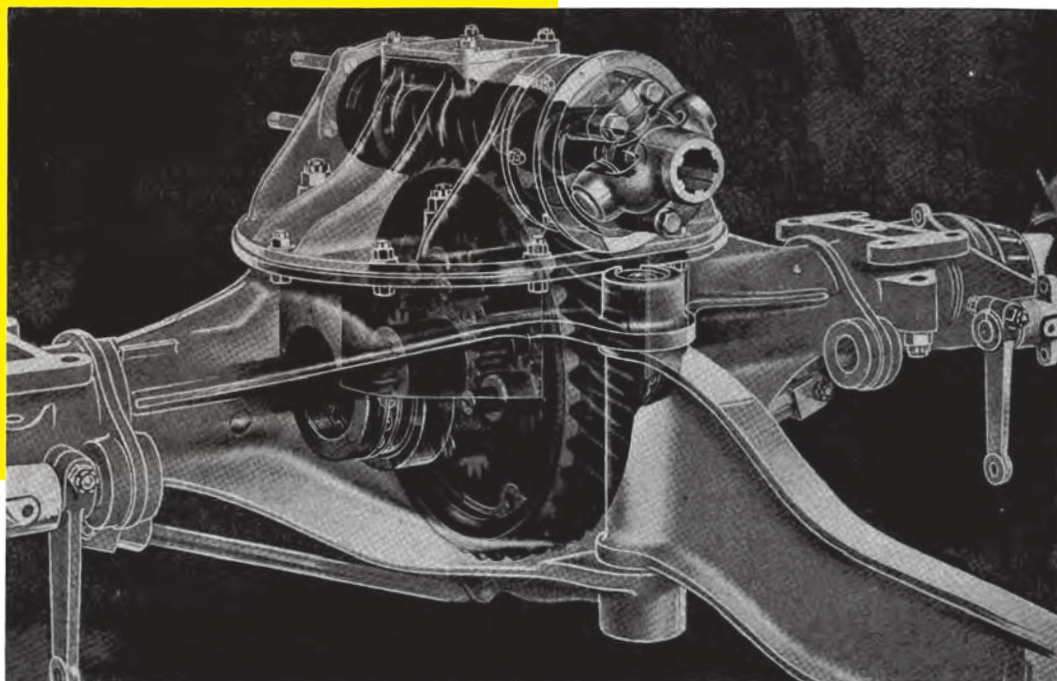
## A First For America's Commercial Truck Industry

*From the Pierce-Arrow Museum at Gilmore Collection*

**T**HE problem of the transmission of the motive power to the rear axle of a five ton truck is no easy one. The gear reduction required is so great - about 8 to 1 - that a double reduction is necessary in all forms of gear except the worm drive. It is not practical to have a bevel gear driven axle, as in the touring car, because of the very large diameter required for the bevel wheel. With a 4 1/2 inch diameter bevel pinion, this would have to be 36 inches in diameter for an 8 to 1 reduction. This would not give any road clearance; the problem of a compound gear drive in the rear axle is not inviting, and this is the reason for the very general use of a bevel gear jack shaft and double chain drive to the rear axle. This is a makeshift arrangement, and one that cannot long survive as is proven by the history of the pleasure car. The chain drive in this class is now a thing of the past, the gear drive being universal.

The Pierce-Arrow Motor Car Company having always advocated the gear drive could not well reconcile itself to the chain drive for trucks. It therefore thoroughly investigated the gear drive and has adopted the worm driven rear axle with a knowledge of its superiority over all other types of gearing where a 7 or 8 to 1 reduction is required.

The efficiency of a correctly designed and properly mounted worm and worm wheel, running on ball bearings, with ball thrust bearings for both worm and worm wheel, enclosed and running in oil, is as high as 95%. The efficiency of a bevel gear jack shaft with a double chain drive to the rear axle is not greater than 80% to 85% when the



PIERCE-ARROW WORM GEAR AND DIFFERENTIAL IN THE REAR AXLE ASSEMBLY

chains are new and well oiled. When worn and dirty they will not give this efficiency.

The worm drive does away with all the care and worry that are incident to the chain drive. The chain drive is very noisy, the worm drive is absolutely silent. This is quite a factor for city use. The life of chains and sprockets on a five ton truck is not greater than 10,000 miles at which time four sprockets and two chains will require renewal. The success of a prominent English firm, which has manufactured three to five ton motor trucks with worm drive for the past eight year, has been such as to warrant a guarantee of their worm gears for two years. This represents a mileage of 30,000 or three times that of the double chain drive.

Compare the work necessary on the chains during this time with that of merely keeping the proper amount of oil in the worm

gear case. The cost of a new worm and worm wheel is not appreciably more than that of two pairs of sprockets and two chains on a five ton truck. Therefore, repairs are less, the care is less, the efficiency is greater, the life is longer, silence is gained, lubrication is easier, the design is simpler and the truck is neater in appearance with the worm drive than with the combined bevel gear jack shaft and double chain drive.

The Pierce-Arrow Motor Car Company is the first in this country to adopt the worm gear drive for five ton trucks, just as it was the first to adopt the gear driven pleasure car ten years ago. Contrary to the opinion of some, worm gears properly designed work equally well whether the worm of the worm wheel is driving, therefore, coasting is perfectly free.

# WHEN BUFFALO WENT TO WAR . . .

In keeping with this issue's best-of-Buffalo thread (see *On the Marque*, pages 4 & 5), the following compilation of interesting Pierce-Arrow excerpts was inspired by *When Pierce-Arrow Went to War* by Brooks T. Brierley. The article originally appeared in the Spring 1999 edition of *Western New York Heritage* magazine and specifically addressed Pierce trucks deployed for military service...which is likewise the focus of the following.

Trucks were an extremely important part of Pierce-Arrow history and contributed heavily to its fiscal well-being, while simultaneously playing a critical role in support of the French defense during World War I...which was a more complicated effort than might be imagined.

Trucks were sold to other Europe forces as well. For example, according to Brierley; "1914 saw 2,239 cars and trucks produced for a profit of \$1,714,000; the following year 4,665 vehicles were built for a profit of \$4,301,000. By 1918 production had nearly doubled again."

In addition to *Western New York Heritage*<sup>1</sup>, other sources include various early editions of *The Arrow*<sup>2</sup> (with period military-use analysis by England's the *Commercial Motor* magazine) and original Pierce truck sales materials from the Pierce-Arrow Museum at the Gilmore in Hickory Corners, Michigan which were assembled and shared by Executive Director Dave Stevens. Roger Sherman's *Charles Clifton of Pierce-Arrow: A Sure Hand And A Fine Automobile*<sup>3</sup> was also referenced.

- Pierce began developing commercial vehicles in 1905, and by late 1906 a cab-over-engine design based on the 4-cylinder, 45 HP Great Arrow running gear was nearly ready for construction and testing. It had a projected 5-ton capacity, the size the Pierce Board believed would be the most profitable.<sup>3</sup>
- It was not until the spring of 1907 that tests began. After a two-year period of development, the Board decided in early 1909 to construct 100 of these trucks.<sup>3</sup>



New York National Guard, silhouetted against the sky as they march to the training camp September 5, 1917



- But...a complete redesign was called for. The cab-over configuration was superseded by moving the front axle forward, with the radiator and engine just behind. The load was positioned over the large rear wheels, the frame redesigned to flex with road irregularities and a transmission brake was incorporated.<sup>3</sup>
- For a second time, development was halted. A careful evaluation of the drivetrain was performed, and a switch from chain drive (due to high maintenance costs and short operating life) to a worm-drive gear set was specified. Most of the rest of 1910 was spent working out this final design and testing it.<sup>3</sup>
- The first 5-ton Pierce-Arrow prototype truck was finally completed in late December of 1910. It was an unconventional and revolutionary approach to such vehicles... with the engine way up front (like a car), the driver behind that over the transmission and the rear axle near the center of the load bearing area at the rear, permitting a shorter turning radius while improving traction.<sup>3</sup>
- The European war insinuated itself unexpectedly at Pierce-Arrow during the fall of 1914, in the form of orders for 300 2-ton trucks. The deal was seen as a bit of a windfall for the truck division, with no expectation that it would be repeated. An order for 300 5-ton trucks would follow shortly thereafter.<sup>3</sup>
- Some of the trucks that went to War left Buffalo by rail. Others went in convoy to the docks in New York on their own wheels.<sup>1</sup>
- When shipments left New York, some trucks were carried on deck in crates. When the steamer put into port not a vestige of the stout boxes was to be found. Heavy seas had broken through the packing, carried the wood away...in this condition they were dashed about until fenders were crumpled, steering wheels had disappeared and bodies were wrenched off.<sup>2</sup>
- In addition to this wreckage, many of the machines suffered through shifting cargo, and in a large number of cases sea water got to magnetos and carburetters.<sup>2</sup>
- Big gangs of French soldiers burst the (other) cases open with crowbars, petrol, oil and water were put into the respective tanks. Many of the motors were completely rusted over. The carburetters and magnetos were taken off, and in the warmth of a small woodshed, were cleared of rust and brine.<sup>2</sup>
- Then, a 25-mile test with a convoy of about 20 trucks is performed each day thereafter. Factory experts are present to give whatever attention may be needed. Each run is brought to a close at an important Fort, where the Army takes over.<sup>2</sup>
- Pierce-Arrow interests in support of the French War effort were originally coordinated by Norris Perry...the company's London, England agent.<sup>1</sup>
- American engineers complain of the varied quality of the drivers. One driver never used a clutch. Another was not aware of the existence of a third gear. To start from cold, one driver injected petrol into the cylinders until it ran out the tailpipe. It's surprising that men of the class should be allowed to get into the French Mechanical Transport department.<sup>2</sup>
- The Paris branch of the Packard Company, which also supplies lorries, maintained a big hire department before the War and has on its books the names of numbers of good drivers. And made arrangements for these men to be appointed to drive Packards.<sup>2</sup>
- The Pierce-Arrow company has sent over a big stock of small parts and will supply these to the Army authorities as desired. Along with a number of unassembled chassis, thus a motor, a gearbox, a rear axle, a steering set can be taken out and replaced by a new unit.<sup>2</sup>
- Tires are all American make and American size. These sizes are not stocked by any French tire firms. Replacements can be secured from one American firm maintaining a factory in France.<sup>2</sup>
- The French have undoubtedly secured first-class machines which ought to give every satisfaction under European war conditions. The Pierce-Arrow lorry, which has indications of English design from radiator guard to rear lamp, is a very fine production.<sup>2</sup>
- The equipment given with the lorries is generally very good. That on the Pierce-Arrow calls for particular attention. The toolbox on the right-hand side of the frame is so designed that the top of it can be used as a workbench.<sup>2</sup>
- Admittedly the finest example of commercial-vehicle construction turned out by any American factory, the Pierce-Arrow on inspection would certainly appear to justify the boast of its makers that it is the Rolls-Royce of American trucks.<sup>2</sup>
- An interesting feature of the engine, as showing to some extent the thoroughness of the design and construction, is the provision for greasers at each end of the spindle of the water pump, and also the arrangement whereby the carburetter may be heated. The method of tensioning the fan belt is interesting. It is modelled on the popular bicycle chain adjuster. The radiator is well on the safe side as regards capacity for cooling.<sup>2</sup>
- The gearbox is fitted throughout with ball-bearings, and is three-point suspended. The fashion of which is quite un-

# War and the Pierce-Arrow

**H**UMAN life can be saved by a rapid war victory. Therefore, The Pierce-Arrow Motor Car Company is cheerfully replacing passenger car production with war work. When we complete and sell the present limited number of Dual Valve Six cars, material for which was ordered prior to April, 1917, there will be no more until labor and steel are available without detriment to the military program.

We do not think the automobile a non-essential, but we believe that our facilities can more effectively be applied to war success. This involves no new policy. It conforms to our procedure since the United States became a belligerent. We voluntarily dropped two popular models to concentrate on one, so that we might rapidly divert our capacity to military production.

Despite the public welcome for our Dual Valve Six, the most powerful, efficient and economical motor we have produced, we feel that practical patriotism demands that we should now make only Pierce-Arrow trucks for essential uses and such product as the War Department may require.

This statement is directed to our patrons who will, we are sure, appreciate our obligations and hold us in their good-will until we are again able to offer our complete line.

# Pierce-Arrow

THE PIERCE-ARROW MOTOR CAR CO.

BUFFALO, N. Y.



usual. It's carried on a ball-pin, similar to those provided for radius and torque rods, which is carried from a link supported on a cross-shaft, carried in bearings and carefully provided with means for adequate lubrication.<sup>2</sup>

- The load carrying component of the real axle assembly is supported by a massive, well-ribbed steel casting.<sup>2</sup>
- We can only conclude that this machine is really one of the finest examples we have had the privilege of examining.<sup>2</sup>
- During the War, orders ranged from as small as 12 2-ton trucks for the United States to as much as 1,800 5-ton units for the French government.<sup>1</sup>
- Pierce-Arrow also assembled about 1,000 "Liberty" trucks during the War for the U.S. government in a separate department. This was a standardized design, created by the U.S. Army's Quartermaster Corps in cooperation with the Society of Automotive Engineers (SAE). Production began in January 1918, with contracts awarded to 15 American companies...including Pierce. It's been said that these Buffalo-built trucks were the best assembled among the many plants to whom allotments have been made.<sup>2</sup>
- At War's end, an American import duty of 90-percent was strategically placed on trucks returning from Europe, to ensure that they would remain there. To ensure that the used units would not compete and oversaturate new truck sales opportunities back in the U.S. market.<sup>1</sup>

**"While Pierce trucks did not have the distinct fender-mounted headlights of Pierce automobiles, the ones built through the mid-1920s are nonetheless easily identified by the unique diagonal indentation in the hood line running from the thick-capped radiator shell to the base of the windshield <sup>1</sup>..."**

- Former editor Roger Sherman called the Pierce-Arrow truck experience in support of World War I, an "unexpected bonanza".<sup>3</sup>
- As an aside, when Studebaker and Pierce-Arrow came together in 1928, Studebaker was supplying light and medium duty trucks. Pierce was still producing heavy-duty units. S.P.A. (Studebaker Pierce-Arrow) was the short-lived commercial vehicle division for the combined company (through 1933, when Pierce reverted back to independent ownership). From ½ to 6-ton models were offered.
- In November 1932, Pierce-Arrow truck production at Buffalo, New York, was halted. All truck parts were loaded into railroad cars and shipped to Cleveland, Ohio where they were assembled into trucks on special assembly lines. Pierce-Arrow trucks were produced at the White plant. Then-Chairman Albert R. Erskine believed that a merger with the White Motor Company would benefit the firm. There were probably fewer than 350 Pierce-Arrow trucks built between January 1931 and June 1933.<sup>2</sup>
- Take a look at the Pierce-Arrow category listings on e-Bay today and you'll see that our favorite Buffalo builder prolifically advertised its heavy-duty trucks... both before and after World War I.

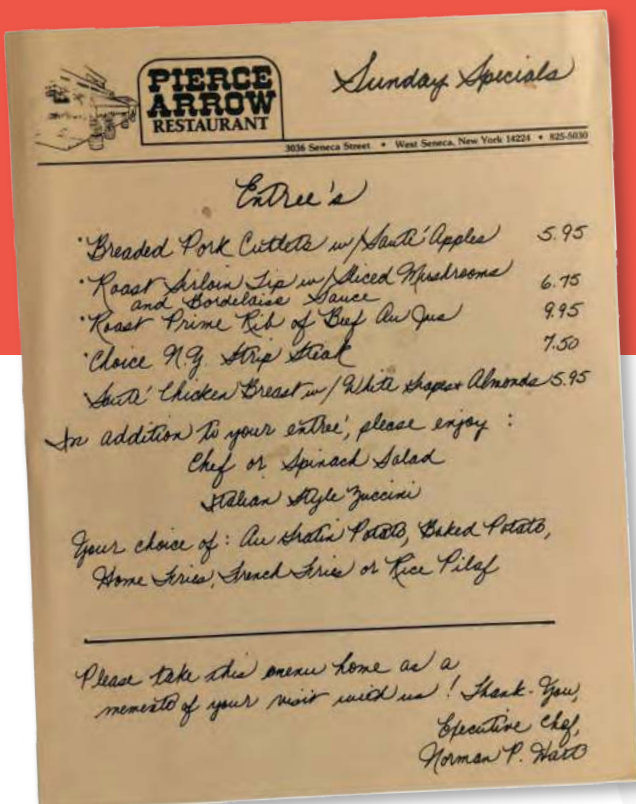
<sup>1</sup> *Western New York Heritage*

<sup>2</sup> *The Arrow - Pierce-Arrow Society*

<sup>3</sup> *Charles Clifton of Pierce-Arrow: A Sure Hand And A Fine Automobile*



# INSPIRED ASSOCIATIONS...



**MULLIGAN'S  
PIERCE ARROW  
RESTAURANT & DISCOTHEQUE**  
3036 Seneca St • West Seneca, NY  
PHONE: 825-5030

**1970-1978**

These associations are intended to make us remember that the Pierce name remains all around us. Even though these inspiring Pierce references are not specifically associated with America's Finest Car... ~ SR





## *~ About the Rear Cover ~*

Fun in the morning mist...and slow lane. This 1916 2-ton Pierce-Arrow recently earned its keep as the 2015 London-to-Brighton chase truck of choice. It's often forgotten how critical these commercial vehicles were to the company's well-being. When this one left the factory, they were no doubt smiling in Buffalo, too.

~ From Zack's Motor Photos



### *- About the Graphic Designer -*

Liz Horne, fellow PAS member and long-time old car enthusiast, has been in advertising and graphic design since 1987. Liz publishes two direct mail advertising magazines in West Georgia and manages a business daily newspaper in Washington, D.C. ~ email: [elizabeth@westgashopper.com](mailto:elizabeth@westgashopper.com)

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David Coco (VA); David Stevens (MI); Diana Stevens (MI); Marc Hamburger (GA)

