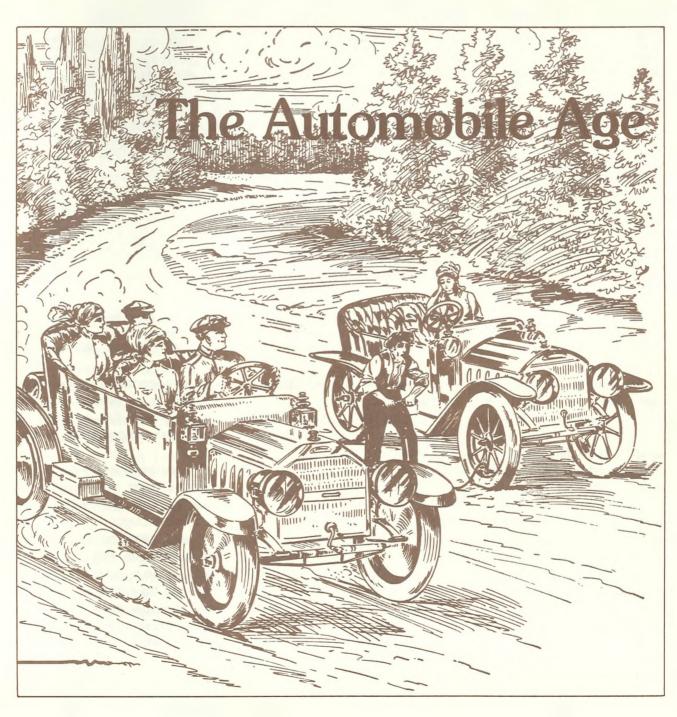
# Goldfinch

Vol. 4, No. 2

Margaret Atherton Bonney, Editor

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The Iowa History Magazine for Young People

## The Way to Go



Eddie Rickenbacker roars down the track in a car built by Fred and Augie Duesenberg of Des Moines. Just as people had enjoyed fast race horses, they also enjoyed fast racing cars. Before this race at Sioux City, the Duesenbergs had entered the Indianapolis 500 in 1913 and 1914, and their car came in tenth both times. Then on July 4, 1914, with the famous Eddie Rickenbacker at the wheel, a Duesenberg car won first place on the new Sioux City dirt track. His average speed was 78.8 miles per hour. Duesenberg cars continued to break records throughout the 1920s.

Today we take automobiles for granted. They are everywhere, Most families own a car. Buses, too, provide motorized transportation in cities as well as for cross-country travel. Trucks deliver goods all over the country. We would not know how to get along without these forms of transportation.

Back in 1900 horses provided power for most travel. People usually thought in terms of ten-mile trips. If they wanted to go farther, they planned to take a train. Railroad depots were usually no more than ten miles from where a person lived. Trains came and went often. For example, in the town of Jefferson

there were seven westbound and six eastbound trains daily.

But trains had their limitations. Railroad transportation began and ended at the depot. For trips between town and farm, for emergencies, or for pleasure riding, people used a buggy or a wagon, pulled by a horse.

Then came the automobile. It solved the problem of slow, short-range transportation, and it bridged the gap between the railroad station and a traveler's final destination.

The first motorcars appeared around 1900. At first, people did not think of them as something useful; they were more like toys. Early cars were also **expensive** 

and undependable. They always seemed to be breaking down, and tires went flat as often as once or twice a day on an all-day trip!

But automakers worked to improve their machines and lower the cost. By 1908, Henry Ford had brought out his Model T. It was **inexpensive**, reliable, and built to run well on country roads and in small towns. It was simple to take care of, and the cost was low enough so that many people could buy it. The speed at which people traveled

**expensive** *adj.* — high priced. **inexpensive** *adj.* — not high priced.

in a Model T (20 miles per hour) greatly reduced the time it took to get from one place to another. It wasn't long before several motor car companies were producing inexpensive vehicles. Soon the whole country was on wheels, driving toward many changes in their daily lives.

The owners of these more dependable, low-cost autos still faced a few problems. In the winter, water in the radiator expanded as it froze, popped the metal seams, and leaked out. To prevent this, some drivers just drained the radiator, put the car up on jacks, and stored it for the winter season. Some kept the car in use by filling the radiator with hot water in order to get it going. Horse blankets covered the motor and radiator to keep it warm while the occupants conducted their business or visited with friends.

Springtime brought different problems for motorists. Roads turned to quagmires as they thawed. Sometimes, people laid boards over the muddy stretches and the drivers who could keep all four wheels on the planks continued on their way. Those who bogged down in the mud would seek help at the nearest farmhouse. With a team of horses, the car could be pulled out of the mire. Some farm people charged for the service, others had no fee.

Learning to drive and care for a car was simple. It took only a knowledge of basic mechanics to fix something if gasoline-powered engine should happen to stop. Farmers had an advantage in that they were

quagmire n. — soft, sticky mud.

sink or stick in mud.

mire n. — soft or deep mud. v. — to



During the early days of automobile use, cars broke down often. It was common to see people stopped at the side of the road, fixing the car. This Ford belonged to a family in Casey, Iowa.

already experienced with gasoline engines because they had used power on their farm machinery. Boys and girls who grew up when those first autos came into use learned to drive at an early age. Some were only eleven or twelve years old. There was less concern about serious accidents then, because cars did not go very fast and there were so few of them on the road.

As people used automobiles for transportation, their way of life began to change. They traveled longer distances and took more trips than in the past. Social life began to include many more activities. Shopping habits changed. Education and health care improved.

Good roads or bad, lowans took to the highway, venturing far from home in their automobiles. One family traveled to see relatives in New Hampshire, another went to visit a brother in South Dakota. Carloads of summer vacationers headed for

Lake Okoboji and even to the Rocky Mountains of Colorado, camping along the way and cooking their meals by the roadside. Most people had lived their whole lives within a few square miles, acquainted only with a few neighbors and those in the nearby town. These same people could now travel to visit faraway relatives. They could also travel to other areas of the country to see firsthand how others lived.

The choices seemed to end only at the ocean's shore. By the 1920s motor outings and vacations had become a national activity, and lowans jumped into their autos right along with the other travelers.

Weekends became a time for travel as well. People began to look forward to Sunday drives into the country for sightseeing or picnics. People who before had lived too far away could now enjoy an afternoon of baseball, and hometown games attracted larger crowds. Saturday night

experienced adj. — having doing or seeing things.

knowledge or skill gained from

acquainted adi. having knowledge of something.

became shopping and fun night, especially for farm families. People drove to town, listened to the band, met their friends, shopped (some stores stayed open til midnight), and saw the latest movie.

lowans had lived isolated from one another on farms or in small towns. Now they could easily meet to exchange ideas. Often they met to learn something new, or to solve a problem of a neighborhood, the town, or the school. Automobiles provided an important chance for women to leave their homes for a few hours and still get their daily housework finished. For women who worked outside the home, automobiles provided a wider choice of places to live. No did the rural longer schoolteacher have to board with a family near the school she could live in a nearby town and drive to work.

Before automobiles appeared, lowans planned a few major shopping trips a year. Usually, they traveled to a city to stock up

**isolate v.** — to set apart or away from others.

**board v.** — paying to eat and live in a house.

on things they needed. The rest of the time people shopped by mail or in the nearest small town. With a car, shoppers could choose to shop in one of several towns, not just the nearest one. Once, it had taken all day to travel ten miles, shop, and return. With a car, a person could travel sixty miles in the same amount of time. Because shopping habits changed, long established stores in smaller towns lost business as people chose to drive on to a city to trade. But while some businesses disappeared, new ones were established to meet the new needs of motorists.

Even the way people shopped for groceries changed. Most grocery stores ran a free delivery service for town customers at the time automobiles began to appear on the streets. A note with an errand runner or a phone call placed the order. The store clerk selected the items and the groceries were delivered to the house. With an automobile, a housewife could drive to the store herself and choose the items she wanted. Brand name products had just begun to be advertised, and they competed

with other goods in price. Now the housewife could compare prices and quality and make her own selections. Soon, merchants began to advertise specials to attract the shopper on wheels. And although families might continue to shop at their favorite store, they could be lured by a special, and become introduced to another grocery store.

The grocery store as we know it today could not have developed without the car. After the 1920s the number of small grocery stores became less as a few larger stores attracted more and more of the business. Most stores stopped their regular delivery service by the early 1940s when World War II gasoline rationing forced a cutback in motor vehicle use. Grocery stores also continued to develop toward one-stop shopping centers by adding meat counters, dairy cases, and even over-the-counter drugs.

As people traded in their horses for cars, livery stables and blacksmith shops went out

**rationing** *n*. — the allotment or share of a supply; as in gasoline rationing.

**livery stable n.** — place where horses are boarded and where horses and carriages may be hired; sometimes called *the livery*.



In the 1940s this mobile library brought books to the town of Fertile, where there was no library. of business. In some cases. livery stable owners wisely switched to automobile repair service. and Automobile garages and gasoline service stations soon replaced the livery stables and the blacksmith shops. lowa's carriage manufacturers also felt the effect of automobile use. They either went out of business or changed manufacture the automobiles.

Because it was possible to travel a long distance in a short time, education improved, especially for students living in rural areas. For many years children attended country schools within walking distance of their farms. These schools, however, only went through the eighth grade. High schools were most often located in towns, and the chances of attending them



Before Rural Free Delivery (RFD), people on farms had to pick up their mail at a post office in town. This usually meant the family waited for mail until someone went to town for some other errand. RFD brought daily mail delivery to farm dwellers. Automobiles replaced the horse and buggy on RFD routes, making it possible to increase the distance covered from eleven to forty-four miles.

Automobiles Registered in Iowa, 1901-1979				
1901	1928	1955		
1902	1929	1956		
1903	1930	1957		
1904	1931	1958 1,006,986		
1905	1932	1959 1,049,392		
1906	1933	1960		
1907	1934	1961 1,088,954		
1908	1935	1962 1,127,335		
1909	1936	1963 1,152,577		
1910	1937	1964 1,192,788		
1911	1938	1965		
1912	1939	1966		
1913	1940	1967 1,299,538		
1914	1941	1968		
1915	1942	1969		
1916	1943	1970		
1917	1944	1971 1,423,455		
1918	1945	1972		
1919	1946	1973		
1920	1947	1974 1,506,124		
1921	1948	1975		
1922	1949	1976		
1923	1950	1977		
1924	1951	1978		
1925	1952	1979 1,703,725		
1926	1953			
1927	1954			

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#### THE MOST SATISFACTORY INVESTMENT FOR THE COUNTRY PHYSICIAN. HARRY P. ENGLE, M.D. NEWTON, IOWA.

When I purchased an automobile I had had no experience with machinery of any kind, and knew practically nothing concerning the principles of a gas engine.

My three years' experience in a motorcar has been with a single-cylinder, 9-horsepower, water-cooled gasoline machine. I have taken care of it myself. I have averaged over 3,000 miles each vear and have found the cost of driving a motorcar to be less than keeping a team, and the comfort, convenience and pleasure place the automobile so far ahead that I never expect to own another horse. I have driven the machine at all times of the year, over all kinds of roads. With the patent chain tire grips for mud and ice and calcium chloride for zero temperature you can always be sure of getting back

After driving the car about six months I sold my horses, but when the roads are very bad I depend on the livery, preferring, as I did when I owned a team, to drive the livery horses over the worst roads. Mrs. Engle is also an automobile enthusiast and handles the car with perfect ease, starting the engine without difficulty, and I feel sure that everything will be all right when she is out driving.

Ninety-five per cent of all my trouble has been with the pneumatic tires. A medical friend tells me that he has completely solved this problem by using solid rubber on his machine, and that the solid tires do not (as claimed by pneumatic people), jar the machine to pieces. I have concluded to try them when in need of new tires.

There is no question about the usefulness of an automobile to a physician. It is so much quicker and can be left standing anywhere without an attendant. It can easily cover twice the ground in a day that a horse can, and in the summer, when the warm weather is hard on a horse, the auto is a great advantage, as both machine and driver are cooler when going fast.

—Journal of the American Medical Association, 1906

were much better for town children than for those living on farms. Students from farms often boarded in town which meant they could not help out at home. There was also the expense of board and room. With an automobile, students could live in the country, drive to and from school every day, and still help on the farm.

Even before automobiles, rural schools had begun to consolidate. This meant the students needed to be transported several miles from home to the consolidated school. Horse-drawn wagons served as the first buses, but before the end of the 1920s faster motor-powered buses had replaced the old horse-drawn hacks.

Doctors were among the first to use automobiles for business. They often visited patients at home, and with a car the doctor could reach a patient miles away in a few minutes. Gone were the long buggy rides taking an hour or more each way. Patients could also get to a city hospital and the special care available there. Fifty years ago the State University Hospital in Iowa City purchased a fleet of cars to provide transportation to the hospital from any place in the state. This meant that lowans could receive special care for illnesses that could not be treated in nearby towns. The transportation service still transports patients to Iowa City.

By 1922, Iowa was second (behind California) in the number of people per automobile in the state. For every five Iowans there was one car. Even during

the Great Depression (the 1920s and 1930s) when people had little money and many were losing their farms, automobiles remained in use. By then, cars were considered necessary by those who owned them. Although the number of cars purchased decreased, people repaired their old cars and kept them running.

During the early 1940s the nation was at war. Passenger autos went out of production while factories turned out tanks, machine guns, and airplanes for the armed forces. By the time the war was over in 1945, the cars people owned were very old. Manufacturers could barely keep up with demand. More people wanted and purchased cars each year.

By the 1960s the problems created by the large number of automobiles in use could not be ignored. The exhaust from autos polluted the air. Accident rates climbed as careless drivers continued to use the highways. In 1973, gasoline consumption was higher than the supply. Gasoline shortages, combined with high prices for fuel caused people to think about the way they used their cars. Some people decided to use other means of transportation when they could. The state of lowa helped to finance eighteen city bus systems to encourage more efficient fuel use.

Some people predict that new forms of transportation will someday replace automobiles — others say cars are here to stay. We do know that seventy years ago, whether traveling short distances or long, for business or pleasure, lowans chose automobiles as the way to go.

**consolidate v.** — to unite; to consolidate several schools.

## Truckin' Along



With the coming of gasoline-powered trucks things could be moved from one place to another more quickly. Iowa farmers found that trucks were very useful. A farmer who lived near the town of Irvin told how trucks had changed his life in the 1940s.

"Years ago to haul hogs to market, I had to get the help of five of my neighbors. In 6 wagons we would carry 30 hogs. We went  $5\frac{1}{2}$  miles to the railroad stop in Irvin. I had to buy a meal for the men and myself. Generally it cost me about 50 cents apiece. Those men ate a real meal, not a lunch. That's three dollars. To put the 6 teams in the livery barn cost \$1.20. Because I had the men come and help me, I had to go and help them, which meant 5 days of work off the farm for myself and my team. The cash cost alone was \$4.20. Today, I can hire a trucker to take 25 or 30 hogs to Harlan, more than twice as far, for only \$2.50. He can get them there and be back in 2 hours. And I don't have to spend any time off the farm."

Because trucks could provide door-to-door service, people began to use them instead of the railroads for long-distance hauling. It seemed more sensible to load the product just one time on a truck instead of the two times needed for railroad transport. After World War II ended (1945) the number of trucks hauling the nation's goods increased greatly.



Some lowans saw the need for trucks and went into the trucking business. This truck belongs to a business based in Des Moines.

## From Here to There

As early motorists ventured away from their own neighborhoods into strange country, they needed some way to keep from getting lost. There were no signs to direct people to where they wanted to go. When the first signs appeared, they were usually put up by business people who hoped to attract new customers. Often a group of merchants got together to promote a special route that would go through their own towns. A number of these routes developed. The "Great White Way," a main dirt road from Davenport to Council Bluffs went through Oskaloosa and Des Moines. Another, the "River to River Road" began at Davenport, traveled through lowa City and Grinnell, and ended at Council Bluffs. Other road associations sprang up all over the state, each one marking the way with a painted pole to guide motorists to the cities along the route.

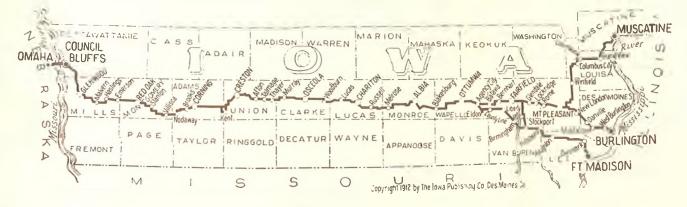
Eventually there were so many different markers that the travelers were almost as confused as they had been before the poles were put up. Finally, in the 1920s a numbering system developed, and new signs with numbers replaced the old poles. Although states had their own numbering systems, a cross-country system of numbered, national highways helped travelers who were driving through more than one state.



Off for a drive near Davenport, these people have covered their clothes and faces with dusters and veils to keep the dirt off of their clothes.

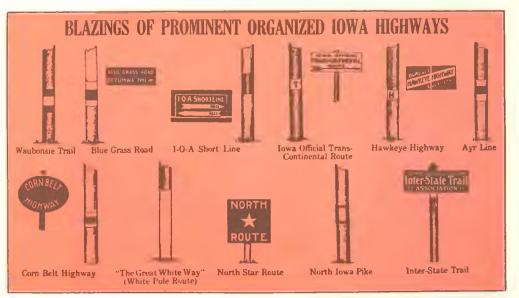
A 1912 map of the Blue Grass Road, one of many early routes across Iowa. The complete Blue Grass Road map came in a small book to be taken along in the car. Each page showed a section of the road in detail. This page shows how the map helped motorists find the way by using landmarks. The booklet also listed information about businesses in each town that motorists might want to find.

### GENERAL MAP BLUE GRASS ROAD



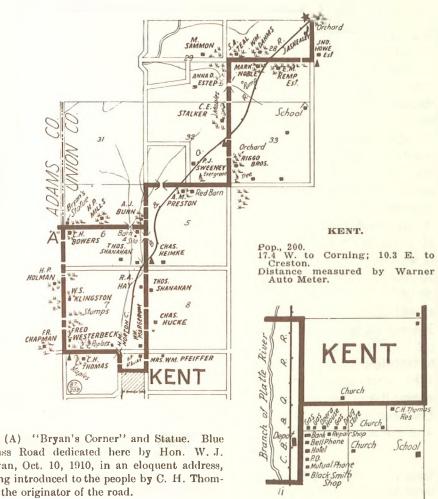
#### LEGEND

HOUSE	WOODEN BRIDGE
SCHOOL	STEEL BRIDGE
CHURCH	CONCRETE BRIDGE
WINDMILL	CULVERT.
TROLLEY	TREE1
RAILROAD-	TREE
MAILBOX(Figures denote Humber of Boxes)42	SIGNLL



Before highways were numbered, posts with blazes of colored paint marked highways. Finally, numbers replaced the painted posts.

blaze n. — the mark made on a tree to show the way a trail goes.



Grass Road dedicated here by Hon. W. J. Bryan, Oct. 10, 1910, in an eloquent address, being introduced to the people by C. H. Thomas, the originator of the road.

# Pulling Out of the Mud



A motor truck on the Lincoln Highway (now U.S. 30) between Ames and Nevada, in 1918. Because the road was improperly drained, the road's gravel surface did little to improve it over a plain dirt one.

Road making had to change after automobiles came into use. Before automobiles, most roads were just plain dirt. Some states had a few miles of "improved" roads. This meant roads surfaced with stone, gravel or shells. In 1900 about 20 to 30 automobiles per day might travel over a road at no more than eight miles per hour. By 1920, however, the number of cars on that same road increased to 750 each day, traveling at speeds up to 30 miles per hour. While two tons was the heaviest load in 1900, trucks in 1920 could haul loads of 10 to 14 tons. Yet, the road had changed very little.

Gravel had been considered a good road surface until automobiles came. But the weight and speed of cars loosened the gravel and pushed it down into the dirt or off to the side of the road. Gravel was all

right for less-used roads, but on main highways concrete was the best surface. Concrete cost more than other surfaces, but it lasted well. Also, tests had proven that tires wore out five times faster on gravel than on concrete. Rough, bumpy roads caused damage and breakdowns. It cost less money per mile to operate a car on a concrete, paved road than on dirt or gravel.

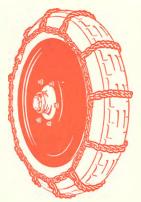
In 1920 when lowa had 407,578 cars registered, there were just 25 miles of paved road outside cities and towns. When

dry, and properly dragged, lowa's dirt roads were excellent for highways. But no matter how good the roads in dry weather, in wet seasons dirt roads became too muddy for travel.

In 1922 after an Iowa-Minnesota football game at Iowa City, thousands of football fans started for home. Before the game ended, a steady rain had begun to fall. As the cars full of happy fans moved along the muddy dirt roads out of the city, a huge traffic jam developed. Motorists without chains on their tires bogged down in the mud. Unable to move, hundreds spent the night in their cars or at nearby farmhouses.

It was not just pleasure drivers who found lowa roads a serious problem. Early bus lines and trucking companies ran into the same problems. When it rained, roads washed out or gummed up. Passengers and deliveries just had to wait to get through. The problem was especially important to farmers. Farm production had improved over the years. Farmers needed reliable roads to get this large amount of produce to the market without delays.

Most lowans agreed that good roads were needed. The



#### Weed Extra Heavy Chains For Balloon and Standard Tires

This chain is the regular type of Weed Chain but is made of heavier material all the way through.

Side chains are Lock-Link heavily galvanized, and the red Weed Lever-Lock Connecting Hooks are used.

For regions where mountain grades, country roads, gumbo soils or other trying conditions put unusual traction strains on chains. Its large size increases traction.

**surface v.** — to apply a layer of material as a top layer on a road.

problem was deciding who would pay for the improvements. Before automobiles, landowners had been responsible for the roads that ran beside their property. This worked rather well when people mainly used roads near their farms. But when the road was to be used by anybody. from anywhere, the landowners no longer wanted to pay for or do the work to keep the road in good condition. The state decided that people who used the roads should pay a share of the cost. Automobile license fees and gasoline taxes helped to provide the money to get lowa out of the mud.

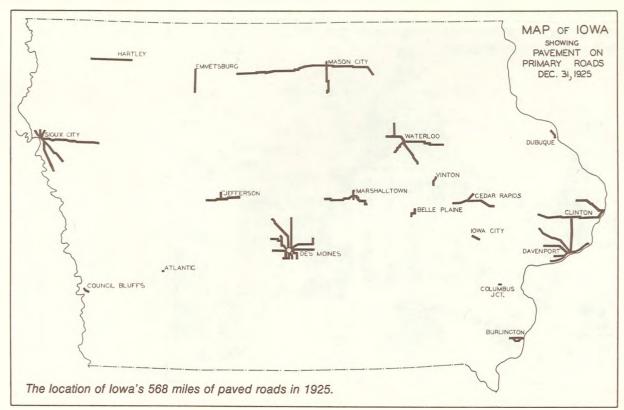
Throughout the 1920s lowa pushed to raise money and build a better road system. The state planned a road network of hard surface roads linking all the counties. By the end of 1931 this network was completed. The Highway Commission proudly announced that lowa was no longer a mud road state.



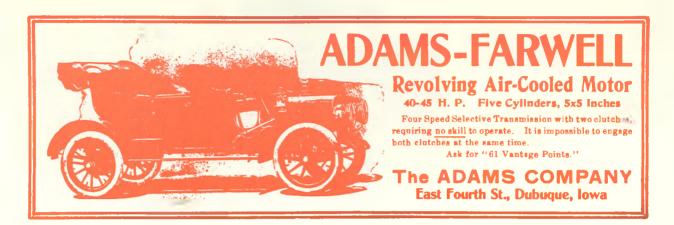
Dirt roads could be kept smooth by dragging them after it rained. Roads were dragged in lowa as far back as pioneer days.

But rural roads still needed help. The goal to provide a surfaced road to every rural home was still far away. This meant paving another 90,000 miles of roads. Road problems could not be solved quickly because the number of cars in use increased at such a fast rate. It took another forty years before lowa could say its country roads were in good shape.

In the 1950s when the national interstate highway system began, lowa decided to link in with the network. The highway provided a high-speed road with no cross roads to cause stopping. It bypassed towns and often shortened the distance to be traveled. The interstate system helped decrease long-distance travel time.



## **Iowa's Autos**

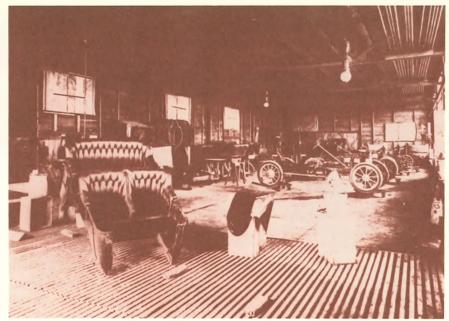


After it had been proven that a gasoline engine could replace a horse to power a buggy down a road, mechanics and designers in almost every state began building automobiles. Many of these people formed companies that lasted about a year or so, sometimes building only one car. Others were more successful. Some say that, in all, there were over 2000 companies in the United States.

lowa had its share of automobile makers between 1900 and 1920. Among them was a young German immigrant named Frederick Duesenberg. Fred was four when his father died. In 1885, when he was seven years old, his mother immigrated to lowa bringing her family of seven children with her. Fred grew up on the family farm. When he was seventeen, he worked in Rockford repairing. farm machinery. Three years later he opened his own bicycle business. He liked bicycle racing and became a champion cyclist. He enjoyed racing so much that he would compete against horses as well as other cyclists. About this time he and his brother August (Augie), designed and built a gasoline motor. By 1902 Fred had his own business in Des Moines, running an automobile supply company.



"It did not simply go up a few steps and then back down, but it went up all of the several flights, landing at the door of the capitol. No other car has ever matched this performance."



Inside the Colby Company factory at Mason City tufted leather seats wait to be installed. Notice the automobile chassis in the background.

**Edward Mason of Des Moines** discovered the Duesenberg brothers' skills and employed them to design a car. Soon, the Mason Motor Car Company was producing and selling automobiles. The automobile was advertised with great flair. To prove the car's uphill performance, the company planned a stunt that was sure to attract attention. George Mason and Fred Duesenberg drove a shiny new Mason car up the Capitol hill and on up the State House steps! The car was thereafter advertised as the "hill-climber."

Frederick L. Maytag, who had been a washing machine manufacturer since 1900, was impressed. He bought the Mason Company, and the Duesenbergs moved to Waterloo where they continued to work on the Mason-Maytag automobile. The company stopped producing autos in 1915.

When the United States entered World War I, the Duesenberg brothers moved to New Jersey where they built motors for the war effort. After the war, they made expensive, custom-made racing and passenger cars. Based in Indianapolis, the Duesenberg cars and motors gained fame on the race track and the highway.

AUTOMOBILES MANUFACTURED IN IOWA				
NAME OF AUTO	COMPANY	LOCATION	DATES PRODUCE	
Adams-Farwell	The Adams Company	Dubuque	1904-1913	
Colby	Colby Motor Company	Mason City	1911-1914	
Dart	Dart Manufacturing Company	Waterloo	1911-1922	
Dartmobile				
	Harper Buggy Company	Columbia	1907-1908	
Hobbie Accessible	Hobbie Automobile Company	Hampton	1908-1909	
L.C.E.	L.C. Erbes	Waterloo	1914-1916	
Littlemac	Thompson Motorcar	Muscatine	1930-1931	
Mason	Mason Motorcar Company	Des Moines	1906-1910	
Maytag	Maytag-Mason Company	Waterloo	1910-1915	
Monarch	Meteor Motor Company	Des Moines	about 1908	
Morrison Electric	William Morrison	Des Moines	1890-1891	
Nelson	Nelson Motor Company	Harlan	1905	
Spaulding	Spaulding Manufacturing Company	Grinnell	1910-1916	
Van	L.C. Erbes Company	Waterloo	about 1914	
Wells	Harold R. Wells Company	Des Moines	1910-1911	
Zip	Zip Cyclecar Company	Davenport	1913-1914	

## Wayside Businesses

At one time, taverns and hotels served stagecoach travelers on the road. But when the railroads began to provide long distance passenger service, many of these hotels and taverns went out of business. When travelers went back to the roads in automobiles people could once again earn a living with a roadside business.

Soon the landscape began to change. Here and there, service stations, restaurants, and tourist appeared. courts Durina summer months, roadside vegetable and fruit stands did a business. brisk These businesses advertised their services on signs placed along the roadside. Manufacturers thought the roadside was a good place to advertise too, and soon signs for their products lined the highways. Eventually, there Hawkeye Refrigerator Lunch Baskets



Keep Contents Ice Cold

Wherever you may be they will provide a nice clean appetizing lunch and cool beverages. You will find them at most stores; if not write us for booklet showing our complete line of Hawkeye Refrigerator and Outing baskets with complete lunch equipments.

BURLINGTON BASKET CO.
BURLINGTON, IOWA

were many, many signs of all sizes and shapes. People decided the roadsides had become ugly and passed laws limiting the size of signs and where they could be placed.

To compete for travelers' dollars, business kept trying to do better. Tourist camps became motels with swimming pools and restaurants. Sparkling clean gasoline stations replaced dirty, greasy ones. Some stations even included miniature grocery stores where travelers could buy snacks and soft drinks.

New businesses appeared in towns and cities too. Drive-in restaurants became popular. especially in the 1940s. Later, drive-through restaurants replaced them. On the edge of many towns, huge outdoor movie screens rose up, where people could sit in their cars to watch the latest feature. Some older businesses changed their ways. Banks built drive-up windows that made it easy for people to take care of banking quickly, without getting out of their cars.



Workers at this Tiffin service station stand ready to help the next motorist with whatever is needed (about 1940).



On long, overnight trips, early travelers camped in tents by the roadside. Later, tourist courts, built near the highway, provided a more comfortable place to stay.



Ferryboats that once carried horse-drawn wagons and buggies across the rivers began to transport cars instead. Later, bridges provided a faster way to cross streams and rivers.



# One Step Further . . .

- 1. Make a list of the kinds of work or businesses that were no longer needed when automobiles replaced horse-drawn vehicles. Make another list of the kinds of work and businesses created by the use of automobiles. Could the second list be changed in the future? Tell why you think so or why you think not.
- 2. Even though road signs were improved in the 1920s there were many signs that remained unclear. In the 1970s the United States adopted uniform international road signs. Look around in your city or town for these highway signs. Why is it important that road signs be the same all over the world?
- 3. Use the automobile registration chart to make a line graph. Can you tell why the number of cars in use was lower in some years?
- 4. Use the automobile registration chart to tell how the number of people per car in lowa increased or decreased for 1940 (population 2,538,268); 1960 (population 2,757,537); and 1980 (population 2,908,707).
- 5. Except for the interstate highway system, roads run along the route on which they were first made. Compare the old Blue Grass Highway Map with an lowa highway map of today.

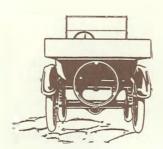
#### LEARN MORE ABOUT AUTO TRANSPORTATION IN IOWA.

#### Workbook

Transportation Map Math
Explorations in Iowa History Project
University of Northern Iowa
Cedar Falls, Iowa 50613

#### **Videorecords**

Traveling Highway 6
From Here to There
lowa Public Broadcasting Network. Available through Area Education Agency Media Centers.



Cover illustration from *Huebinger's Automobile and Good Road Atlas of Iowa*, 1912.

The editor wishes to thank Tom Morain for use of his unpublished manuscript about automobiles in Jefferson County, Iowa. *All illustrations are from the collections of the State Historical Society of Iowa unless otherwise indicated.* 

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