

Introduction: Transportation in America and the Carriage Age

The story of transportation in America is the saga of people constantly on the move. The difficulties Americans faced when they transported themselves or their goods from one place to another during the nineteenth century are almost impossible for us to comprehend today. Overland, people could travel only on foot, on horseback, or in a horse-drawn vehicle; on the water, by sailing ships, barges, rowboats, and canoes. Whether on land or water—most trips required both—travel was difficult and expensive. Americans were continually searching for new and better ways to transport people and goods as dependably and as fast as possible, and they started with the horse.

It's hard to imagine a world without cars, buses, and trucks. But put yourself back in the nineteenth century. Every great city was full of stables. The blacksmith was an important man, running a business like a modern car repair garage. City dwellers depended on horses for their daily provisions and for getting around. City horses had to be fed, and there was big business in supplying oats, barley, hay, and straw, with provisioners as common as gas stations are today. Before the invention of trains and automobiles, animal power was the main form of travel. Horses, donkeys, and oxen pulled wagons, coaches, and buggies.

The carriage era lasted only a little more than 300 years, from the late seventeenth century until the early twentieth century. For much of that time, only the very wealthiest people could afford to own and maintain their own vehicle. In the United States, the real height of the carriage era lasted less than a century, from about 1850 to 1910. Primitive roads held back wheeled travel in this country until well into the nineteenth century, while the advent of the automobile doomed the horse-drawn vehicle as a necessity of life and transportation in the early 1900s.

The History of Horse-drawn Vehicles

No one knows when animals first started to carry things. It may have been around 6000 B.C. when the first cities were built. Oxen were probably the first animals used, then donkeys. They were probably not ridden by people but used to carry loads. After about 4000 B.C., tree trunks were used for rollers, making loads easier to pull. At some point around 3500 B.C. in Mesopotamia, wheels were added to sleds to make the first carts. Wheeled vehicles were soon used in warfare. These early wheeled vehicles gave rise to animal-powered chariots and wagons, allowing people to travel far from their homes. This helped to build great empires.

Almost as important as the wheel was the discovery that horses could be ridden. It was probably made about 5000 years ago by nomadic horse herders in Central Asia. The first horsemen must have ridden bareback, without saddle or stirrups. Around 1300 B.C. the bit was invented: a piece of metal placed between the horse's teeth that can be manipulated using leather straps called reins to command the horse.

For most of the Middle Ages, the carts and wagons of Europe were hardly different from those of Roman times. Usually there were four wheels of all the same size, with no suspension, and no steering. One major change, though, was the introduction of the collar harness in China. The early days of horse-drawn transportation were uncomfortable for the horse. The first harness was simply a bar strapped across the shoulders of two animals and attached to the wagon by a pole. Such harnesses, called yokes, often rode up the horse's neck and pressed on its windpipe.

The collar harness keeps the weight of the load on the horse's shoulders, not on its neck. In this way, a horse in a collar harness can pull up to five times the weight of one in a yoke. Using a horse to pull a wheeled vehicle became much more efficient after the collar harness was invented. Even so, wagons in sixteenth-century Europe struggled along at far less than walking pace. Not only were they crudely made, but they had to run on terrible roads. If they could afford it, most people preferred to travel on horseback.

According to popular belief, in the fifteenth century, wagon builders in the Hungarian village of Kocs came up with the idea of using smaller front wheels on wagons, allowing them to turn more easily and making them more stable. Soon they added a more important refinement: suspending the body of the vehicle between the axles rather than resting it on them, thereby absorbing some of the shocks of the road. The *kocsi*, or coach, spread throughout Europe in the sixteenth and seventeenth centuries.

At first coaches were used only by the rich. Coaches for hire were introduced in London as early as 1625, and stagecoaches also appeared. But it was very costly to travel by coach, and the roads were so bad that most people preferred to ride a horse. Only the coming of the Industrial Revolution at the end of the eighteenth century really spurred the demand for faster, cheaper transportation. Few people could afford to feed and take care of more than one horse, so the coach-for-hire industry developed. People opened livery stables where customers could rent horses and carriages. These coaches-for-hire were the model for modern taxicabs.

**For an excellent timeline of horses and horse-drawn vehicles, look at page 59 in *Gallop Across the USA: Horses in American Life* by Martin W. Sandler. The book travels with the educational materials.

Roads

Americans have always needed roads. Travel on land was difficult in the new nation. The young United States contained some four million people spread out over almost 800,000 square miles. Contact and communication between citizens and officials of the new nation were essential if the young country was to survive. The problem was that there were almost no adequate roads. Colonists often used trails made by Native Americans, who had followed animal paths that led to water. Some of the roads you use today may at one time have been paths worn smooth by hairy mammoths, bison, or bears.

In the 1800s, most country roads were dirt paths with two ruts worn by wagon wheels and a grassy strip in the middle. These roads were often hard and bumpy; in warm months, they were dry and dusty, while in the spring they were wet and muddy. In winter, they could be covered with ice or snow. Most roads were so narrow that if two buggies met, one might be forced into a ditch along the side of the road. In those days there were few bridges, so drivers simply drove their wagons through rivers and streams.

The answer to the road problem came in the form of a type of road that had first appeared in medieval England. It was called a turnpike, deriving its name from the pole (or pike) that stretched across the road at 10-mile intervals. At each of these barriers, travelers were required to pay a toll in order to continue on the road. Turnpikes were constructed on a firm bed of different layers of crushed stones, which provided drainage and eliminated many of the problems of bad-weather travel. These roads were wide enough for large horse-drawn vehicles.

By 1820, turnpikes had been built or were under construction throughout the United States. People marveled at the condition of the new roads and were delighted with the reduction in travel time. The 62-mile journey from Lancaster, Pennsylvania (America's largest inland city at the time) to Philadelphia, for example, had always taken more than a week. By using the Lancaster Turnpike, it could be made in fewer than four days.

By 1904, there were about two million miles of public highway. Gravel covered about 100,000 of those miles. Macadam, a mixture of crushed rock and tar, covered another 40,000. The rest were still dirt.

Specialized Horse-drawn Vehicles

From the end of the eighteenth century into the twentieth century, the horse-drawn vehicle was a key element in the evolving transportation system that increasingly linked urban and rural America. Private carriages and commercial vehicles also played a vital role in the growth of cities. Horse-drawn vehicles contributed to moving goods and people to and from urban centers, encouraging the settling of rural areas, the growth of cities, the creation of wealth, and the rise of consumer culture.

If you think about all the kinds of cars on the roads today, you could probably name many of them and discuss what specialized uses they have. Similarly, carriages of the past were also highly specialized; several types are exhibited in *Going Places*. From stage coaches designed to carry passengers across the country to heavy wagons developed to haul industrial goods, horse-drawn vehicles once fulfilled most of the needs now handled by cars, trucks, and buses. Even after the development of canals, then railroads, then motorized trolleys, horse-drawn wagons and carriages continued to function as a critical local link between other often disconnected pieces of the larger national transportation network. Work wagons, omnibuses, horse-drawn cabs, and coaches connected people to rail hubs and ports. They moved people around cities. They allowed farmers to get their raw goods to train stations and city markets, and they enabled large manufacturers to get their products from the factory to the consumer. Carriages played a key role in the transportation revolution that transformed almost all areas of American life. In turn, changes in transportation influenced the design, production, and use of horse-drawn vehicles.

One of the most important types of specialized horse-drawn vehicles was the firefighting wagon. Until well into the twentieth century, most city buildings and houses were made primarily of wood, and light and heat were generally provided by some sort of open flame. Hundreds of structures caught fire every year. Fighting fires was a major, often heroic, effort, and firefighters depended on horses. Every city fire-fighting brigade kept a team of horses in special stalls within the firehouse. Fire horses had to be fast, agile, and smart. They also had to be strong. Fire wagons, containing all the equipment needed to put out a fire, weighed as much as 4,000 pounds. Whether they pulled a wagon with ladders and hoses or one containing either hand or steam pumps, the horses had to be able to race from the station, haul the wagons through dense city traffic, and get to their destination as quickly as possible.

Fighting fires with horses was so effective and so admired that well after motorized fire engines made their appearance, many cities and towns were reluctant to give up their horse-drawn equipment. When the last team of fire horses in New York City made its final run in 1922, thousands of people lined the streets to get one last look at the sight.

Conspicuous Consumption and the Growth of the Leisure Class

Great and ostentatious wealth was a relatively new phenomenon in America in the nineteenth century. Through the 1850s, much of the United States was still largely agricultural, with a few centers of wealth typically concentrated along the East Coast (in port cities like New York, Philadelphia, and Boston, for example). But during the Civil War and the years that followed, increasing industrial development changed the economic landscape of the nation. The growth of big businesses such as railroads and manufacturing spurred the expansion of inland cities and produced great wealth. The club of millionaires grew, and by the 1890s there were more than four thousand. Elaborate palaces were built—along New York’s Fifth Avenue, for instance — rivaling the great homes of Europe. Most of the newly wealthy were urban dwellers and, as cities grew, so did a movement to create parks that could serve their recreational needs.

These new urban and suburban parks served a status-fulfilling role. Drives on which the wealthy could promenade were important parts of new parks, and access to carriage drives became an important promotional tool in developing the more fashionable suburbs that were often linked to the city through the park. New York City’s Central Park became the prototype of the new urban park. Designed by Frederick Law Olmsted and Calvert Vaux, an important feature of the park was a series of drives reserved exclusively for carriages. The carriage became a precise and very visible marker of mid-century class status. In New York City, owning a carriage and driving in the park established membership in the city’s upper class. People in society were judged by their mode of travel. Just as today we know the difference in class between a Kia and a Mercedes Benz, people could tell the rank of others by a glance at their horse and carriage.

By the 1870s, carriages had become more affordable and more widely available, partly because of advances in mass production. In America, improvements in technology and production methods during the second half of the nineteenth century resulted in the manufacture of modestly-priced carriages in large quantity, and this change, along with improved roads, led to increased mobility for many.

By the late-nineteenth century, the most popular vehicle in America was the buggy, a light, four-wheel carriage with or without a collapsible top that seated one or two people. By the beginning of the twentieth century, mass production had lowered costs so substantially that mail-order catalogs advertised simple vehicles for as little as \$20. In 1900, the average annual earnings of a non-farm employee were about \$483.

Seasonal Horse-drawn Vehicles

When winter arrived, the weather required changes in the modes of transportation. Deep snow on trails made walking impossible and wagon wheels often got stuck. Water froze, and people couldn't travel by boat, so people traveled in sleighs in the winter. Sleighs were similar to carts but they had no wheels. Two flat metal bars called runners slid easily over snow. Cutters were small sleighs that were pulled by a single horse.

Thick snow made traveling in a sleigh a smoother ride than traveling in a wagon. But most sleighs were not covered, so the ride could be very cold. People kept warm by covering themselves with fur blankets and with heavy coverlets called "lap robes." **Lap robes** (which were designed to cover a rider's legs, lap, and feet) came in many kinds of designs and could be surprisingly bright and colorful. They often featured pictures of flowers, horses, dogs, or other sporting scenes. People also used **foot warmers** to keep warm in a sleigh or carriage. These were metal boxes that were filled with hot coals and placed on the floor inside the vehicle.

The Demise of Horse-drawn Vehicles

The demise of horse-drawn vehicles began in the late-nineteenth century with the gradual transition to other forms of transportation, particularly motorized streetcars and automobiles. The change from carriage to car did not happen overnight. From the late 1890s to the 1920s, carriages and automobiles overlapped on city streets. Early cars were expensive and unreliable, regarded more as amusing novelties than as a serious means of transportation. But by 1910 innovations in mass production and engine technology had created a vehicle that was both more reliable and more affordable; it soon became clear that the car was here to stay. While there were still more than 4,600 carriage companies operating in the United States as late as 1914, by 1925 there were barely 150. By 1929, there were fewer than 90.**

Ironically, in many ways the new automobile industry was the child of the older carriage industry. Studebaker, for example, began as a carriage manufacturer and retooled its production to manufacture automobiles. Other early automobile companies were essentially assemblers, using parts often produced by carriage makers. Interestingly, like some nineteenth-century carriage factories, auto manufacturers such as Henry Ford succeeded through vertical integration—bringing all parts and processes under one roof.

**For the source of these statistics and a thorough but readable account of the rise and fall of the American carriage industry, the following book is highly recommended:
Kinney, Thomas A. *The Carriage Trade: Making Horse-Drawn Vehicles in America*.
Baltimore and London: The Johns Hopkins University Press, 2004.

Fast Facts

Modern horses are believed to have descended from the Dawn Horse, *Hyracotherium*, a tiny creature that was just a little more than 12 inches high that lived some 50 million years ago. The horse was one of the last species of livestock to be domesticated, or taught to live with humans. The horse was probably first hunted for food. Then, sometime around 3000 B.C., it began to pull plows and then people.

Genghis Khan ran an early version of the Pony Express to maintain communications in his vast Mongol Empire. His riders rode in relays along caravan trade routes, each covering some 150 miles.

Among the first horse-drawn vehicles was the chariot, invented by the Mesopotamians in about 3000 B.C. It was a two-wheeled cart used at first in royal funeral processions. Then army commanders decided chariots would be a great way to surprise the enemy. Armies could roll in, attack, and thunder off.

The first wheels were made from three solid pieces of wood fitted together in the shape of a circle. They were almost too heavy to be useful. Then people discovered a way to make them lighter. They cut out most of the wood from inside the circle and replaced it with wooden bars called spokes. Vehicles with spoked wheels were faster and easier to manage.

American settlers heading west in the 1800s often used oxen to pull their big wagons. Oxen were slower than horses, but they could pull four times as much weight.

In the mid-nineteenth century, there were over one million horses stabled in London, and 1,000 tons of horse dung had to be cleared from the streets each day.

Long before the invention of engines, horses drew loads along rail tracks. When steam railroads arrived at the beginning of the nineteenth century, they quickly became the biggest owners of horses. Horses were used for unloading freight and taking it to its destination.

The Civil War changed the shape of the carriage making industry in America. Before the war, most major carriage companies were located in New England and the urban Northeast. The South was a major customer. The loss of southern markets and the resulting debt hurt the traditional centers of carriage-making (especially in New England), while U. S. government contracts for vehicles like baggage wagons opened up greater opportunities for companies in the Midwest.

By the 1860s and 1870s, as more settlements grew west of the Mississippi, Midwestern carriage companies were well-placed to take advantage of the new business, and the center of the large-volume carriage industry shifted permanently to the west, in states like Ohio and Indiana.

The Studebaker Brothers Manufacturing Company in South Bend, Indiana was one Midwestern carriage company that was saved due to money from government contracts during the Civil War. They eventually became the leading horse-drawn wagon manufacturer in the nation.

At the turn of the nineteenth century, there were 21 million horses in the U.S. and only about 4,000 automobiles.

By 1915, the carriage industry had been decisively overtaken by the automobile industry, but as late as 1935, there were still about 3,000 buggies manufactured each year for use in rural areas. In places like Lancaster, Pennsylvania, the Amish still make carriages for their communities.

In a New York City traffic study undertaken in 1907, horse-drawn vehicles moved at an average speed of 11.5 m.p.h. A similar study conducted almost 60 years later found that automobiles moved through the city's business district at an average speed of only 8.5 m.p.h. In cities, milk, ice, coal, wood, and other necessities were delivered to the home by horsedrawn wagons. In some places, dairy deliveries continued by horse-drawn wagon into the 1920s.

Mail order catalogs carried a whole line of carriages, and carriage making flourished from New England to the West.

By 1900, 40% of the American population lived in cities with populations of 2,500 or more; between 1860 and 1915, 2,000 of these urban centers developed.

In the 1890s, Times Square in New York City, originally called Long Acre Square, was a primary place of business for blacksmiths and the carriage trade, where thousands of carriages were bought, sold, and repaired.