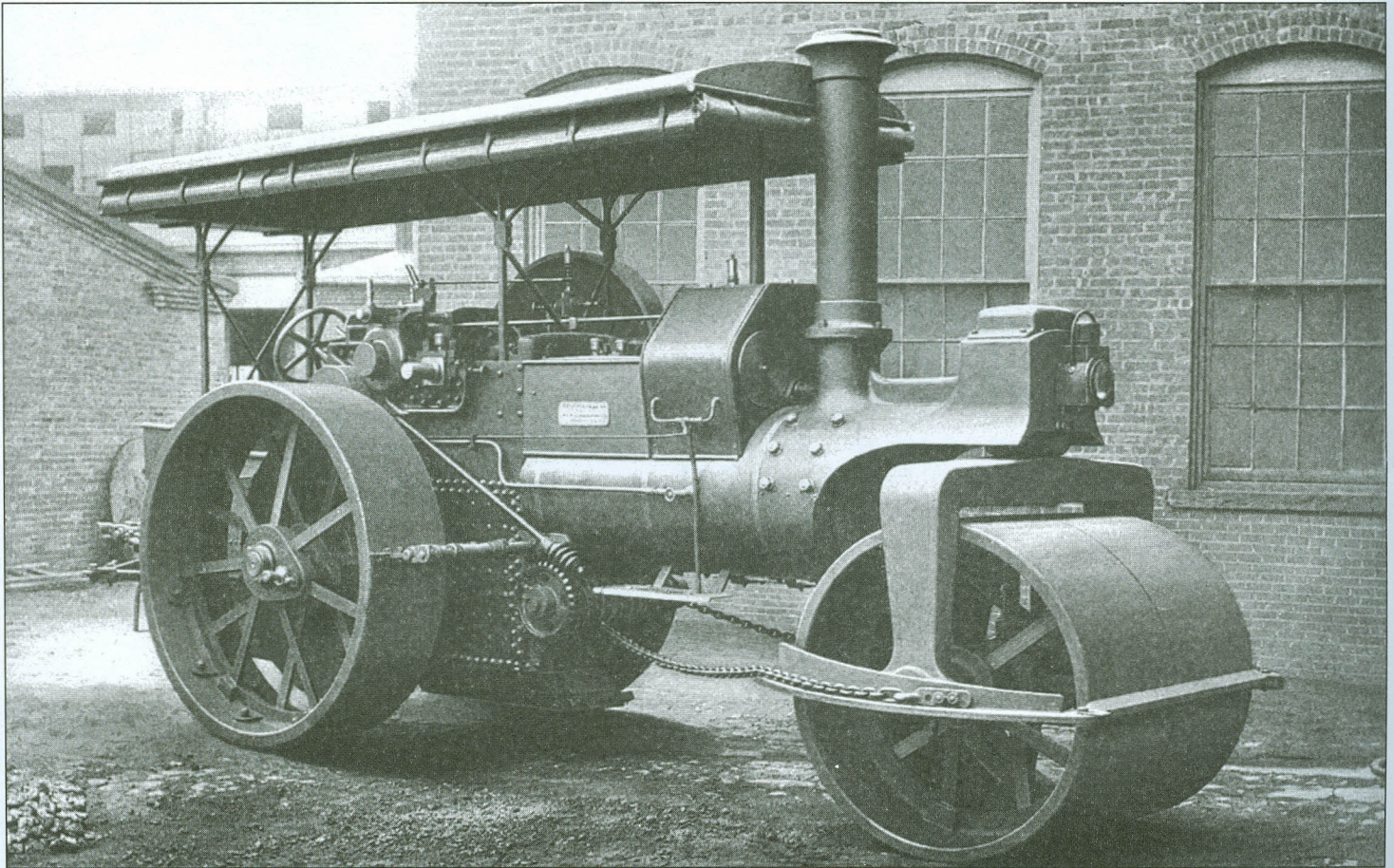


# THE INFLUENCE OF THE WRIGHT FAMILY ON STEAMROLLERS

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*Posing in front of the Cooke Locomotive factory in Paterson, New Jersey, is one of the prototypical William C. Oastler steamrollers produced in 1899. These machines featured steam jacketed cylinders and specially patented draw bars and spring scrapers. While the roller featured does not show a water tank beneath the boiler, Oastler rollers could be equipped with such tanks by special order. This view is taken from the Oastler Steam Road Roller catalogue of that year. DEREK RAYNER COLLECTION.*

Researchers, Raymond L. Drake and Robert T. Rhode, relate the saga of Englishmen Thomas Wright and his sons, Edward T. and Frederick W., all of whom had some considerable influence on various aspects of steam rollers in both Britain and America.

Recently, the authors have been in contact with Virginia D'Antonio and Tom Wright, two of Thomas Wright's great grandchildren and, as a result, have been recipients of a considerable amount of family information, records and photographs.

According to the materials received from these descendants, Thomas Wright was born in Lincolnshire in 1838 and, by

the early 1860s, he was employed as an engineer. Thomas' eldest son, Edward, was born in 1865. By 1870, Thomas was working at Tasker's works in Andover, Hampshire. In 1873, he had moved on yet again and was a manager at the world-renowned Aveling & Porter works in Rochester, Kent, and Edward was an apprentice engineer there as well. Virginia D'Antonio and Tom Wright have both said that family tradition indicates that Thomas Wright invented the split conical front roller - used by Thomas Aveling in 1871 - although this has not yet been confirmed from researches within the UK.

In February 1889, Edward Wright emi-

grated to Harrisburg, Pennsylvania, where he was joined by his fiancée that summer. The couple later married in Harrisburg where early U.S.-produced steamrollers were built. Coincidentally, Edward also worked there - as a draughtsman. It seems likely he was employed by the Harrisburg Car Company, given his background in the steamroller industry.

In July of that same year, Thomas Wright also emigrated - from Rochester - with a daughter and three other sons. Between 1890 and 1891, the extended Wright family moved to Springfield, Ohio, and while Virginia and Tom are unsure about Thomas' employment at that time, they are well aware of what

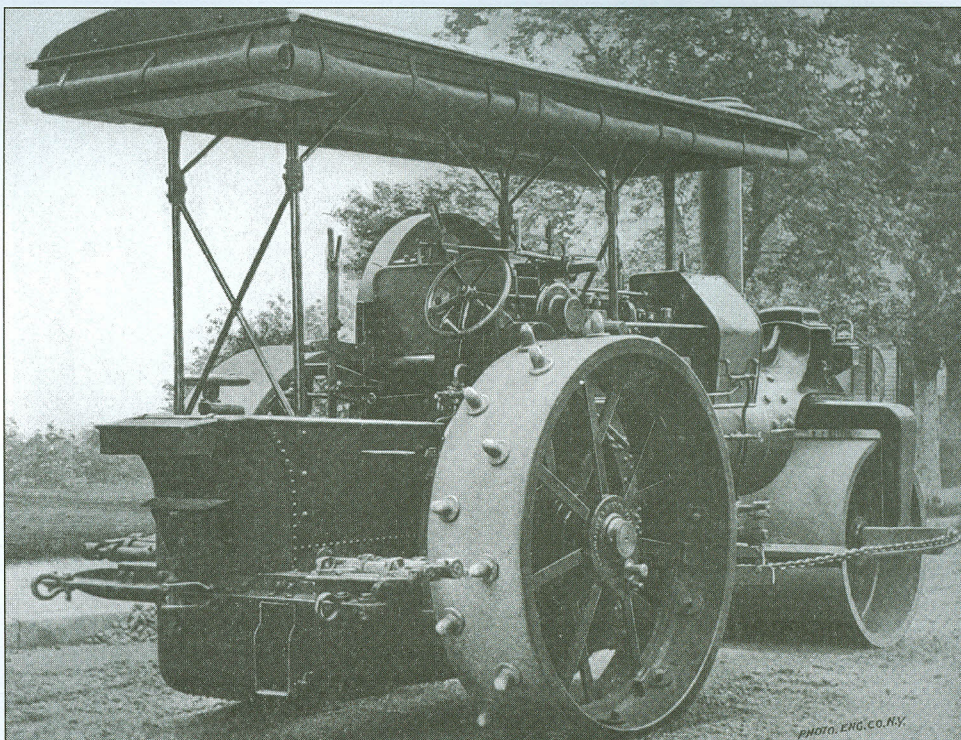


Edward was doing - for he had gained employment by the firm of O. S. Kelly and was designing steamrollers for them.

The first of these new machines rolled out from the Kelly works in 1892. Ten years later, in 1902, the Kelly-Springfield Roller Company broke away from the O. S. Kelly Company, and, even later, in 1916, the Buffalo Steam Roller Company of Buffalo, New York, merged with Kelly-Springfield to create the Buffalo-Springfield Company. These two firms had courted one another prior to the merger; for, beginning as early as January 1913, rollers with Buffalo parts were in production at the Springfield facilities.

However, to return to Kelly, Oliver Smith Kelly was a pre-eminent personage in American steam history. Striking it rich in the California gold fields, he had ample capital to risk in establishing a series of industrial enterprises in order to further his interests. The Kelly name would thus come to be associated with traction engines, threshing machines, road rollers, piano components, trucks and tires.

With just a small portion of his earnings, he also bought a wholesale grocery business. In 1857, Oliver relinquished the grocery concern to join the farm implement firm of William Whitely and Jerome Fassler. The name was soon



*The patented spring-loaded scrapers and draw bar plus footstep can be seen in this rear view of a similar Oastler steamroller. Additionally, this machine is equipped with steel picks fitted in the rear rolls. Note that the man-stand appears to be very British in origin. DEREK RAYNER COLLECTION*

changed to Whitely, Fassler & Kelly. Their works manufactured a well-received line of reapers and mowers and, satisfied with the

progress of Whitely, Fassler & Kelly, Oliver stayed with this manufacturing company until 1881.

Prior to 1882, he had served as president of the Rinehart, Ballard & Company Threshing Machine Works. In 1882, he invested part of his wealth in Rinehart and Ballard, a firm that sold threshing machines licensed through John Pitts, one of the famous (in the USA) Pitts twins from Buffalo in New York State. With Oliver as president and his son Oliver W. as superintendent, the firm reorganized as the Springfield Engine and Thresher Company. As a result, profits increased and the business expanded. In 1889 or 1890, the name changed again, this time to the O. S. Kelly Company.

Around the time when Kelly's lucrative firm bore his name, Edward T. Wright convinced Kelly to improve his products along British lines. Wright, together with Kelly's crew of mechanical engineers, began to replace the Springfield design of agricultural traction engines with a new style of Kelly engine, closely modelled on British concepts. These included such changes as locating the valve above the cylinder, encasing both in a large steam jacket, fitting the shafts on thick hornplates, and supplying a man-stand with a surround entered



*Wright family members (from left): Edward T., his brother Frederick W. and patriarch Thomas Wright. This circa-1903 photograph depicts an Oastler model of roller on the right and, barely visible to the left, its successor, a Monarch "King of the Road" steamroller. PHOTO COURTESY OF THE WRIGHT FAMILY.*





*This scene, taken in front of the Groton, New York, plant of the Monarch Road Roller Company, shows Thomas Wright demonstrating two Oastler rollers for his son, Edward T. PHOTO COURTESY OF THE WRIGHT FAMILY.*

from the engine's left side. All indications in the factory literature at that time suggest that, around 1892, Kelly began producing steam road rollers in addition to agricultural engines. Like the Wright redesign of the Springfield engine, the new rollers boasted British features, including a solid large diameter flywheel, typical of British manufacturing practice.

According to the 1880 census, Clark County, Ohio, had a population of 41,947 - with some 20,729 of these inhabitants living in Springfield - a far cry from the population of five hundred back in Oliver Kelly's boyhood. Springfield was fast becoming a city of factories within the state that, of all states in the U.S., was the location of the highest number of steam engine manufacturers. The Kelly works occupied ten acres and were located on the line of the Cleveland, Cincinnati, Chicago, & St. Louis Railway Company.

From 1898 until approximately 1905, Kelly experimented with a triple-cylinder, cross-compound, cable-ploughing road locomotive, a rare photograph of which appears at the top of page 58 in Floyd Clymer's *Album of Historical Steam Traction Engines* (New York: Bonanza, 1949) and on the bottom of page 160 in Jack Norbeck's *Encyclopedia of American Steam Traction Engines* (Sarasota: Crestline, 1976).

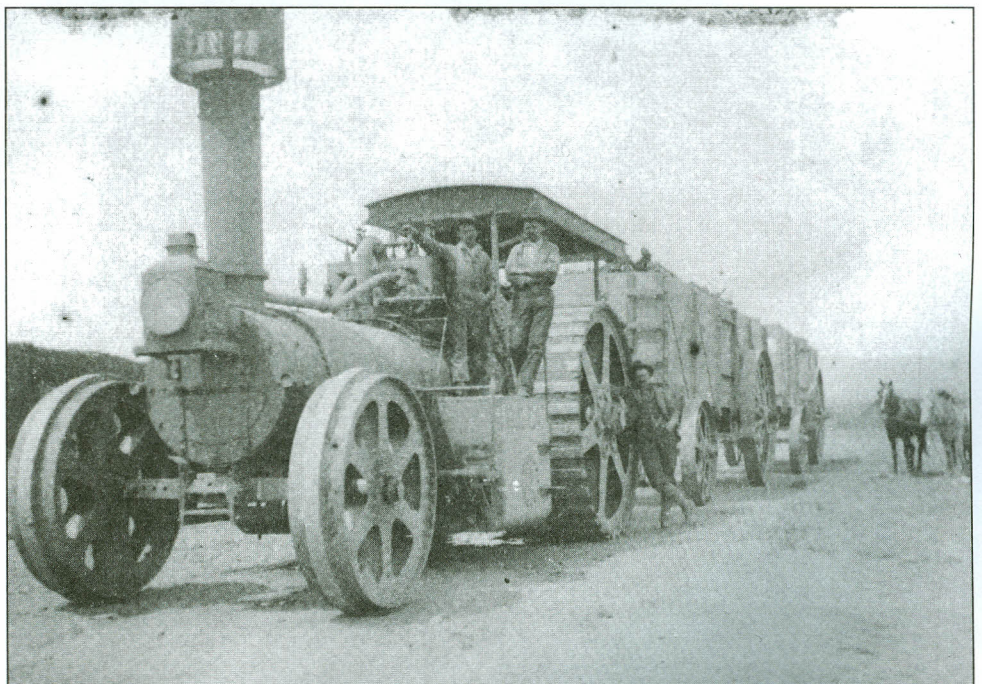
Some technical details of this engine might be useful here. The engine could develop 120 horsepower. All three of its cylinders could receive steam direct from the boiler, producing a so-called "simple" engine for bursts of power; alternatively,

the two outside cylinders could take exhaust steam from the middle cylinder to form, in effect, a single low-pressure cylinder. A lever changed the engine from a simple to a presumably more efficient compound machine by routing the exhaust to the outside cylinders' steam

chest. The connecting rods were attached to the crankshaft at 120-degree intervals. The engine used a radial valve gear and had no flywheel since the weight of the reciprocating parts was sufficient to ensure smooth revolutions.

The boiler barrel was made from 7/16-inch thick steel plate and measured forty-three inches in diameter. The seam was double riveted. The boiler had 360 square feet of heating surface area and carried a pressure of 180 pounds per square inch. The engine's massive plate wheels were eight feet in diameter with a face of two and a half feet, and each weighed almost three tons. These used three driving pins, not a differential gear. The cable drum held up to 1,350 feet of one-inch diameter wire rope.

The U.S. publication *Scientific-American* for July 29, 1899, featured a photograph of this remarkable engine on page 68. The accompanying article, entitled "A Huge Over-land Traction Engine," states that such engines were shipped to Cuba. They could haul up to 112 tons each (not counting the weight of the engine and wagons) and were sold to remote plantations and mines far away from railroads. Included with this article now is a previously unpublished photo-



*A rare find! This is only the fourth known image of the extremely unusual O. S. Kelly triple-cylinder road locomotive. Other extant pictures show these machines equipped with a horizontal drum for cable-ploughing beneath the boiler. Of all the American engine manufacturers, only Kelly produced such a cable-ploughing device. This photograph shows the engine used purely for hauling without the drum mechanism. Interestingly, Frederick W. Wright is seen standing at the left side of the platform of this engine that is said to be hauling rock during the construction of the Panama Canal. PHOTO COURTESY OF THE WRIGHT FAMILY.*



graph owned by Virginia D'Antonio and Tom Wright of one of these Kelly triple-cylindrical road locomotives. Family tradition holds that this particular engine was used in the construction of the Panama Canal. Records indicate that Frederick Wright did, in fact, spend the winter of 1906 at the canal site in Panama, but documents have recently come to light that suggest that he also spent a season in Cuba, which raises the possibility that the photograph could even have been taken in that country.

Although multiple cylinders were commonplace in North American marine practice, the Kelly triple-cylinder engine must have been one of the first - if not indeed the only - traction engine to be so equipped in the U.S. The fact that the Kelly firm attempted to design such a behemoth attests to Oliver Kelly's willingness to explore unknown territory.

At the turn of the century, Kelly sensed that his company's future would benefit from diversification: he thus began manufacturing piano plates at the Springfield works. The O. S. Kelly Company gradually phased out its agricultural equipment production to focus on these piano components. For years, the harp frames used in Steinway pianos have come from the same Kelly factory in Springfield, Ohio.

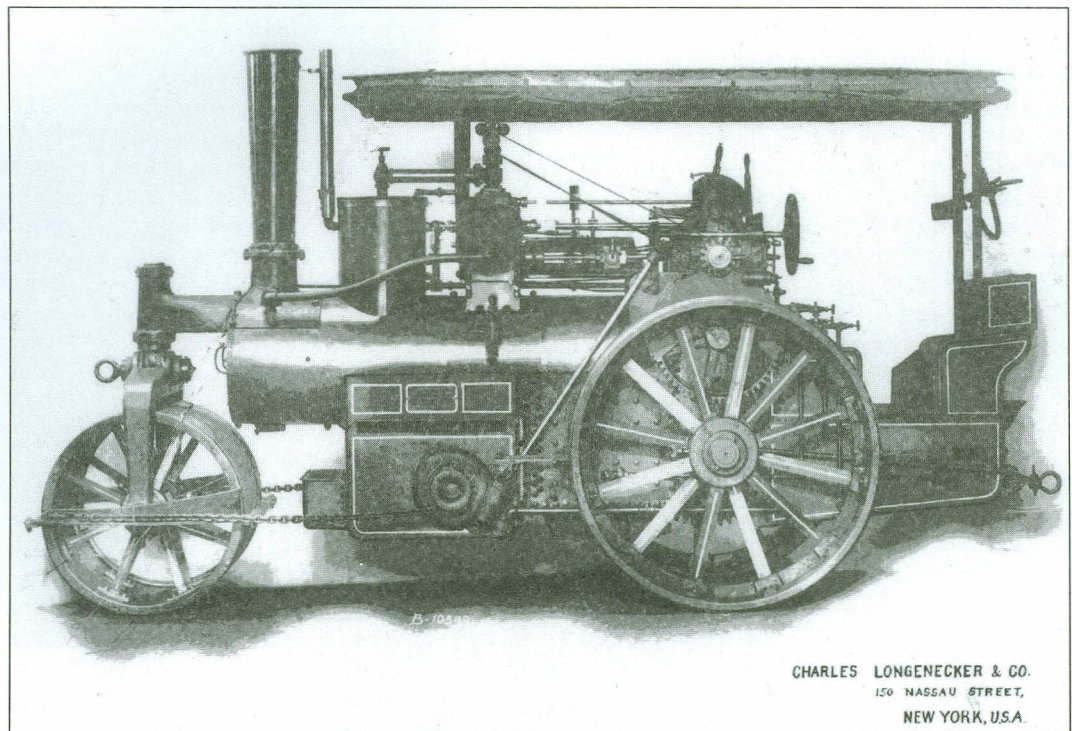
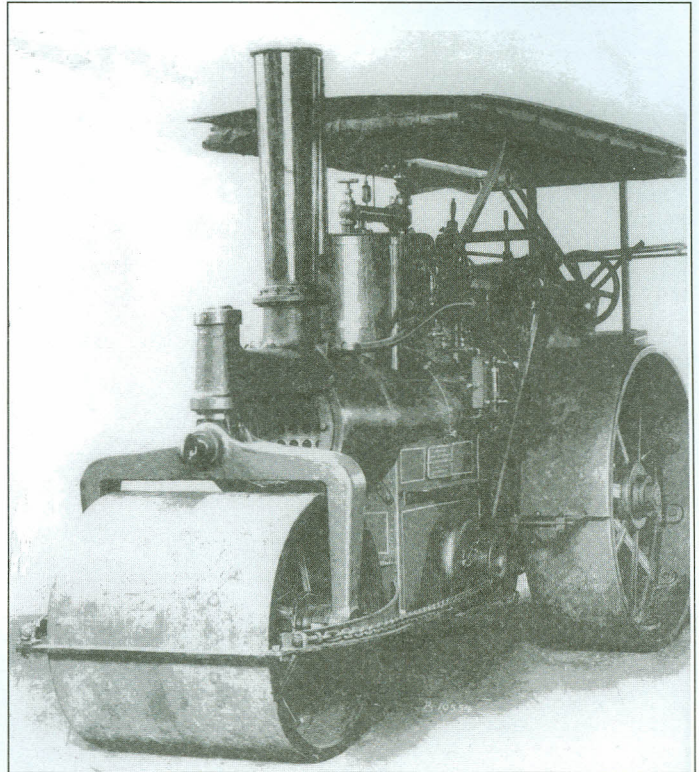
In 1894, Oliver Kelly's son Edwin joined his brother, Oliver W., and inventor Arthur W. Grant in founding the Rubber Tire Company, forerunner of the Kelly-Springfield Tire Company. As early as 1903, the O. S. Kelly Company had built a small number of steam wagons. Following in his father's footsteps, Edwin, in 1910 organized the Kelly Springfield Truck Company. He stayed with that firm for only two years but remained with the O. S. Kelly Company until 1921.

Meanwhile, William Churchill Oastler of New York who had long imported and distributed Aveling & Porter's products - both steamrollers and traction engines - had introduced a steamroller named after himself to the American market. There is an old adage that says that timing is everything, and, in our research, this could not be truer. As luck would have it, Derek Rayner, vice chairman and archivist of the Road Roller Association and *Old Glory* technical editor, recently discovered a rare catalogue, dated 1899, of the Cooke Locomotive Company of

Paterson, New Jersey, that depicts the first Oastler type of steamroller. This machine conformed so closely to British design practice that some historians of American steamrollers suspect that the parts were shipped from England and assembled in the United States.

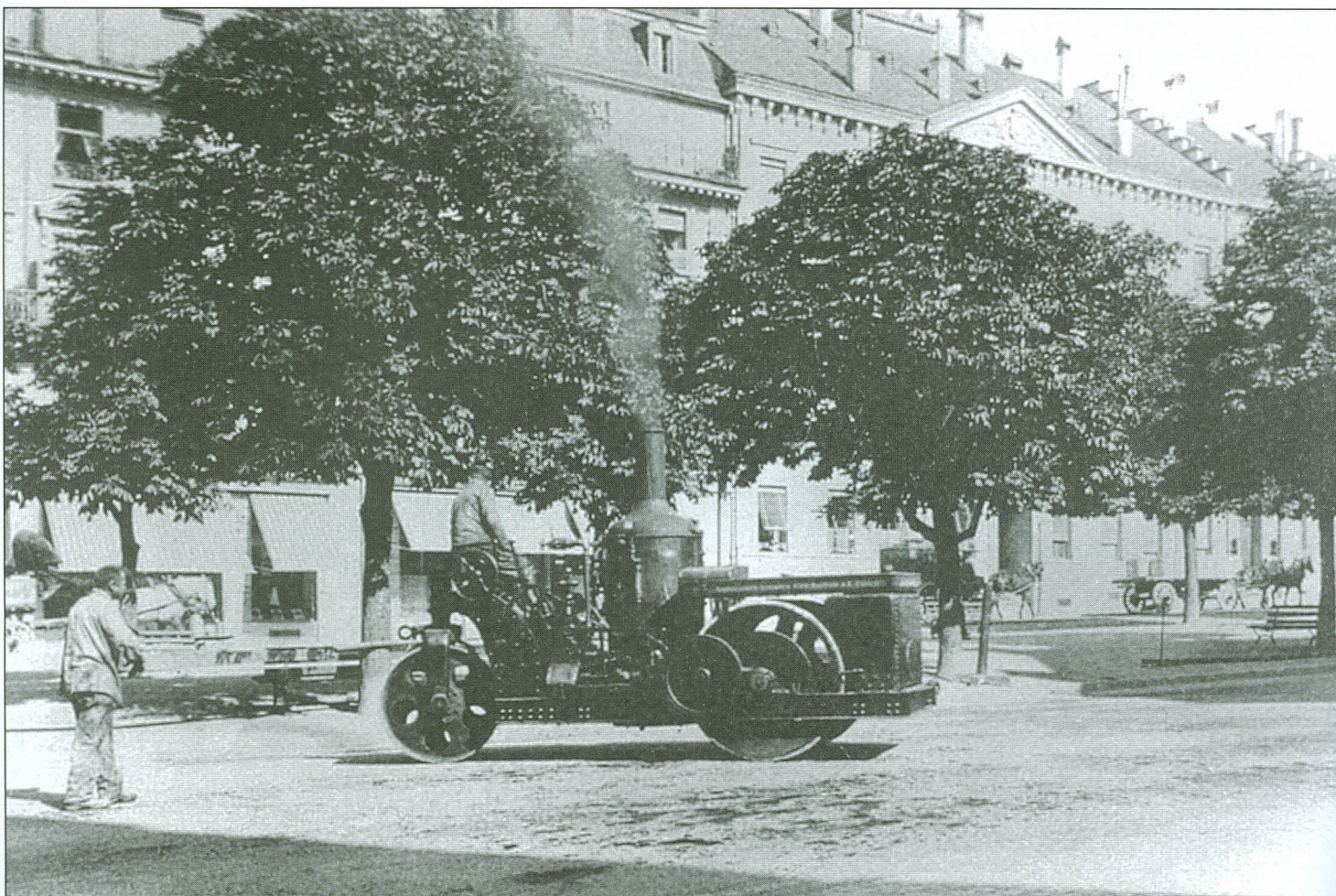
Shortly after the prototype models were produced at the Cooke Locomotive Works, Oastler came into control of the Monarch Company - at Groton, New York. Until about 1901, the first Monarch model of roller was identical to the Patterson, New Jersey, roller model. This follows - because Oastler had come into control of the Groton works at approximately that same time. In 1901, a new design of Monarch roller - the "King of the Road" model - was introduced by him, which was configured along American lines and which lasted throughout the production of that firm.

The man who gave his name to the Kelly-Springfield steamroller, Oliver S. Kelly, died in 1904. Some types of tandem roller manufactured by the firm found their way to Europe - one is recorded as being in use in Switzerland and another in Belgium. The latter, No. 2499 of 1911, survived into the



*Two very recently discovered illustrations of a Longenecker-built steamroller that shows the English type of bunker on what is essentially an American-style roller. PHOTO COURTESY OF THE WRIGHT FAMILY.*





*An example of the small 5-ton tandem steamroller produced by the Kelly-Springfield Road Roller Co. in 1913 in use in the tree-lined avenue of Hirschengraben (literally "Deer-ditch"), Berne, Switzerland, in 1915. DWCS (SWISS STEAM ROLLER CLUB) ARCHIVE.*

preservation era by virtue of having its worn-out boiler replaced by a diesel engine. It is now restored to its original steaming condition and is based in the Netherlands.

In 1903, continuing his steamroller traditions, Edward Wright became superintendent of the American Road Roller Company - also known as the Wright Roller Company - in Groton, New York. His father, Thomas, joined him to work part-time as a draughtsman and two of Edward's younger brothers also found employment with the firm.

In August 1903, the Monarch firm at Groton became known as the American Road Roller Company - with which the Wrights were associated - and the following month, the Monarch Road Roller Company evolved from American Road Roller.

Forming the firm of Charles Longenecker & Company of New York, Edward Wright and Charles Longenecker produced a machine called a Longenecker roller that, in reality, was a Monarch roller with a British-inspired

bunker based on a U.S. patent taken out by Edward and Charles. Previously, it was thought that this design was produced from 1907 until 1910, but, according to the Wright family records, these machines were built from 1905 until 1908. Charles Longenecker & Company continued to offer the Monarch three-wheel design of steamroller until 1910.

In 1909, Edward formed a traffic signal business in New York City that continued to flourish until his death in 1948. His father, Thomas, had died in England in 1916. Virginia D'Antonio and Tom Wright have identified at least ten U.S. patents issued to Thomas or Edward Wright in which they are listed as British citizens; most of these patents involve improvements in steamrollers.

The members of the Wright family certainly brought about the joining together of British and American steamroller designs and their influence spread throughout the American compaction industry. They deserve special recognition for their distinguished contributions to the history of steam power and, in par-

ticular, to steamrollers.

#### **Acknowledgments**

The authors wish to thank Virginia D'Antonio and Tom Wright for their kindness in sharing their family history and various significant documents. Their gift to the steam community is indeed extraordinary. We are deeply indebted to our friend and fellow researcher Derek Rayner of the UK for his generous assistance and advice with this article. Additionally, we would like to thank noted English author Michael Lane, well versed in histories of U.K. traction engine manufacturers, for sharing some of his researches into the firm of Aveling & Porter with us.

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