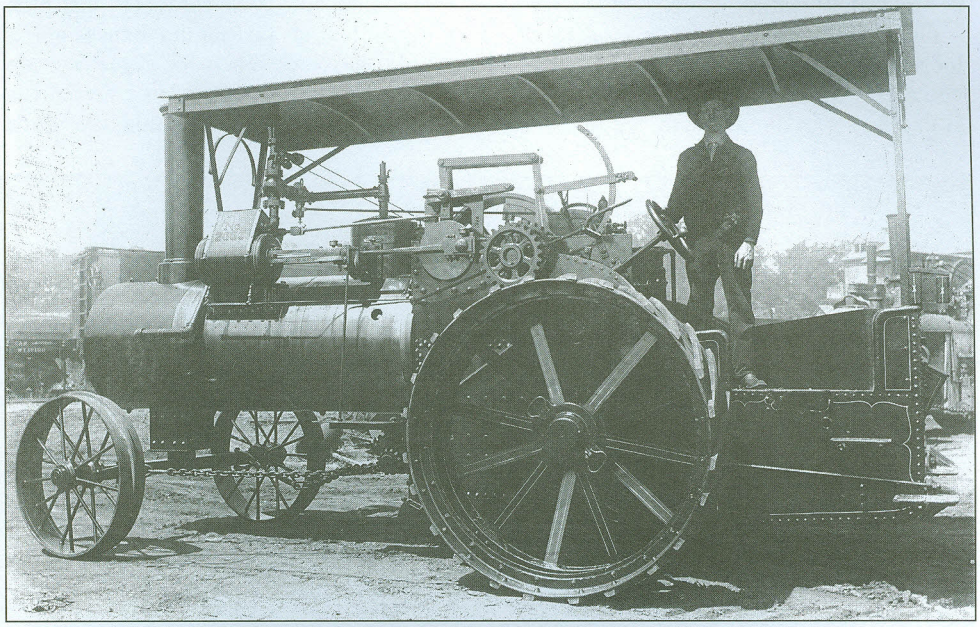
The Kelly Empire:
The History of One of the True Giants of the Compaction Industry
Part 2: The Kelly-Springfield Era

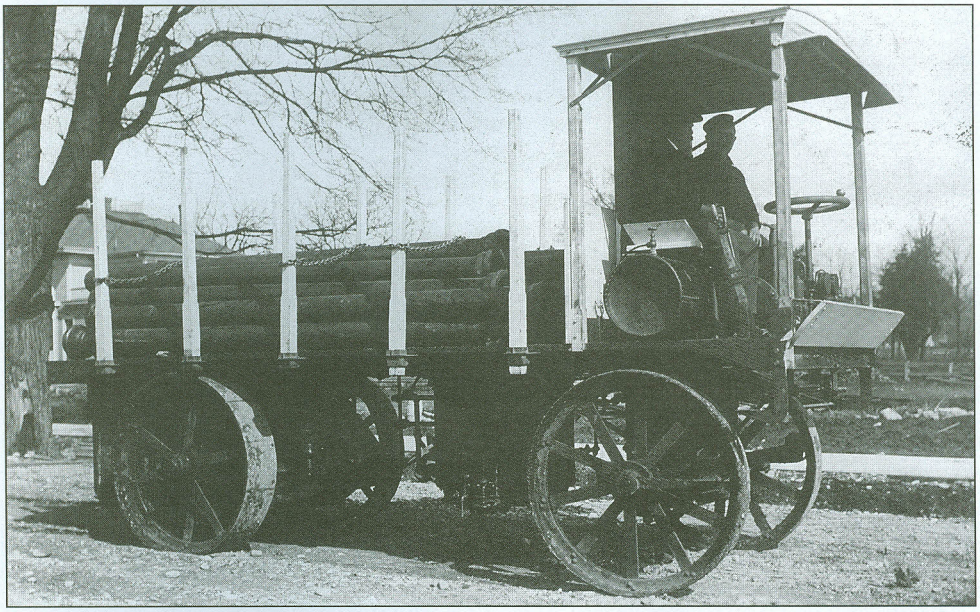
By: Raymond L. Drake and Robert T. Rhode

The 1891 *Engineering News* foretold the arrival of a new steamroller produced by the O. S. Kelly Company of Springfield, Ohio. The ensuing decade witnessed vast growth in the Kelly enterprises, which had their roots in the manufacturing of agricultural steam engines and related implements. At the beginning of the twentieth century, changes took place in what had become the diverse empire created by Oliver S. Kelly. As there were many different and unrelated businesses owned by the Kelly family, it only made sense to split them off from the parent company as separate entities. At the time of O. S. Kelly's death in 1904, this process was virtually completed.

According to a 1987 three-part corporate history published by Kelly-Springfield, as well as documents in the collection of the Clark County (Ohio) Historical Society, Oliver's sons, Edwin and Oliver W., and inventor Arthur W. Grant inaugurated the Rubber Tire Wheel Company on May 28, 1894. The Kelly tires were made of solid rubber and were typical of carriage tires. A related firm begun by Edwin Kelly and Arthur Grant in 1898—Grant Axle & Wheel—located in the East Street Shops, which were the world's largest industrial complexes under one roof, burned to the ground in 1902. The ten businesses within the East Street Shops lost over half a million dollars, an astronomical sum in the early 1900s. Grant Axle & Wheel never recovered. In 1899, the Consolidated Rubber Tire Company of New Jersey purchased a controlling share of the Kelly tire firm's stock, and, in 1900, the Buckeye Rubber Company (a subsidiary of Consolidated) removed the tire manufacturing business to Akron, Ohio. In 1906, the firm became one of the earliest companies to produce molded-tread pneumatic tires for passenger automobiles. In 1907, a flat-tread tire was introduced. Two years later, truck tires began to feature in Buckeye's busi-



Although the Kelly name became most closely identified with steamrollers, the O. S. Kelly Company of Springfield, Ohio, built agricultural traction engines. Here in the factory yard is a spiffy new one bearing Serial Number 2058 and boasting fresh paint. Photo courtesy of Raymond L. Drake and Robert T. Rhode



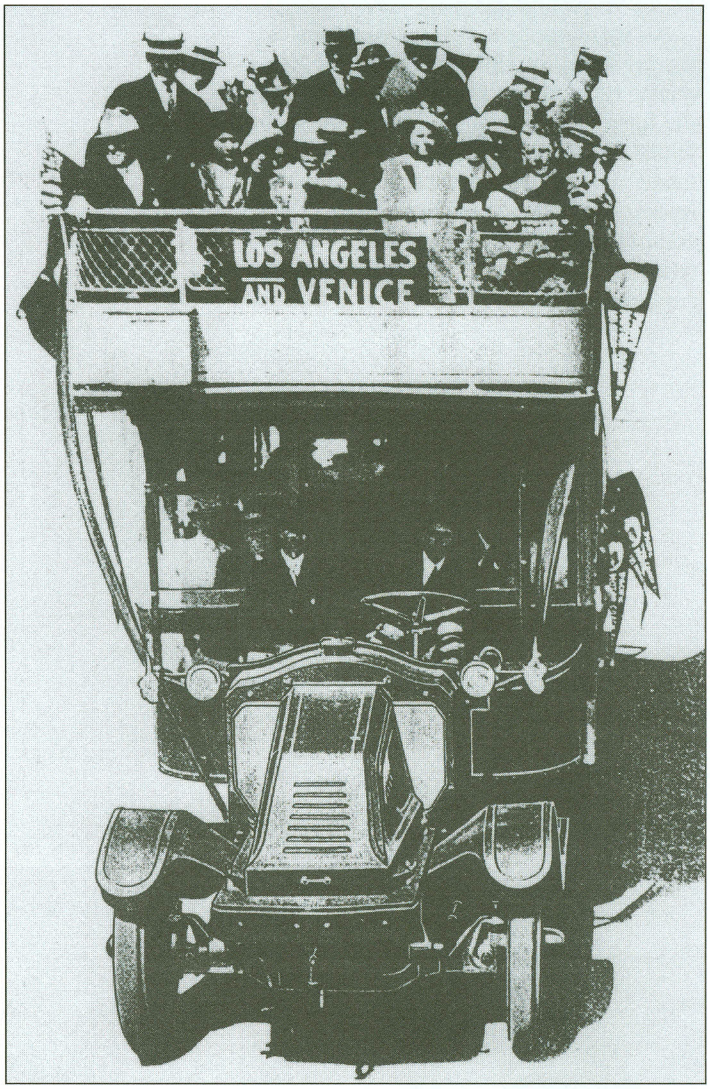
Kelly experimented with a steam-powered truck. The driver and passenger certainly have an unobstructed view of the road. Photo courtesy of Raymond L. Drake and Robert T. Rhode

ness plan. In 1915, Buckeye and Consolidated merged to form the Kelly-Springfield Tire Company, which had factories in Akron and Wooster, Ohio, and in Buffalo, New York. In 1917, a new facility in Cumberland, Maryland, was begun.

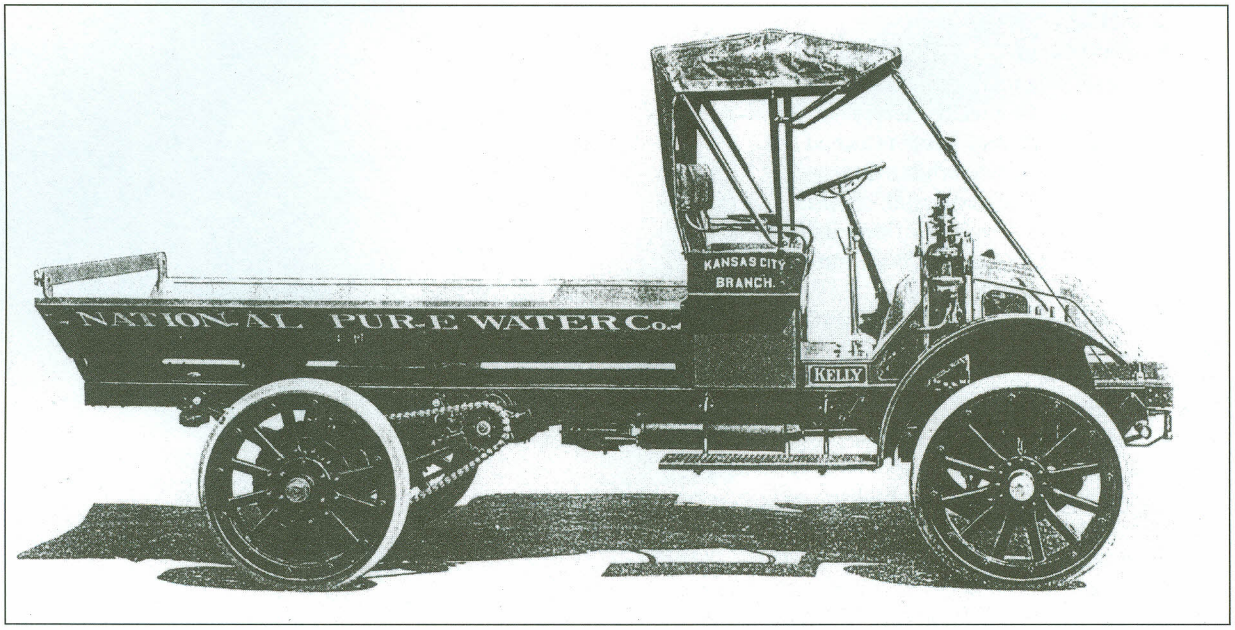
The first Kelly truck was, not surprisingly, powered by steam and first appeared in 1903. In 1910, Edwin organized the Kelly-Springfield Truck Company and offered the firm's first gasoline-powered model. Until 1912, 1-, 2-, and 3-ton trucks were manufactured with air-cooled engines. Customers could order open bodies in the two larger sizes. In that year, Edwin retired from business, although he kept close ties to the O. S. Kelly Company. Also in 1912, the firm's name underwent a slight change, becoming the Kelly-Springfield Motor Truck Company. The trucks now came in sizes that included 3 1/2-ton and 5-ton models and featured water-cooled 4-cylinder engines with the radiator behind the engine and with a hood reminiscent of Renault vehicles or Mack trucks. The transmission consisted of a 3-speed gearbox and a double-chain drive. In 1914, U. S. Army General Pershing used Kelly trucks to supply troops during the border skirmishes with Mexico. In that same year, the Pacific Motor Coach Company ordered 106 Kelly-Springfield trucks and the National Pure Water Company of Kansas City, Missouri, ordered 1,000 trucks—at that time, the largest truck order placed in the United States. By 1918, models ranged from 1 1/2- to 6-ton sizes. Even though a successful worm-drive model was initiated in 1918, chain-driven trucks were manufactured until 1926. At some point in the 1920s, the firm became known as the Kelly-Springfield Truck and Bus Corporation. Steel discs replaced the wood spokes in the wheels. Smaller models situated the radiators in front of the engine. Although truck production ended in approximately 1927, a parts and service office persisted in Springfield until 1931.

Arguably the most significant occurrence in the history of the Kelly enterprises was the establishment in 1902 of the Kelly-Springfield Road Roller Company. Many firms that manufactured steamrollers were content to build one model and then market it for many years largely unchanged. This was especially true of builders of steam traction engines who would simply put smooth wheels on their standard farm engine and call the new machine a road roller.

This was not the case with the Kelly-Springfield Company, or for that matter the firm's successor, the Buffalo-Springfield Company. Kelly was a true innovator with an engineering department that regularly invented improvements for existing products and that continually experimented with totally new designs.



The Pacific Motor Coach Company was delighted with Kelly's double-decker gasoline-powered omnibus that served Los Angeles and Venice, California.



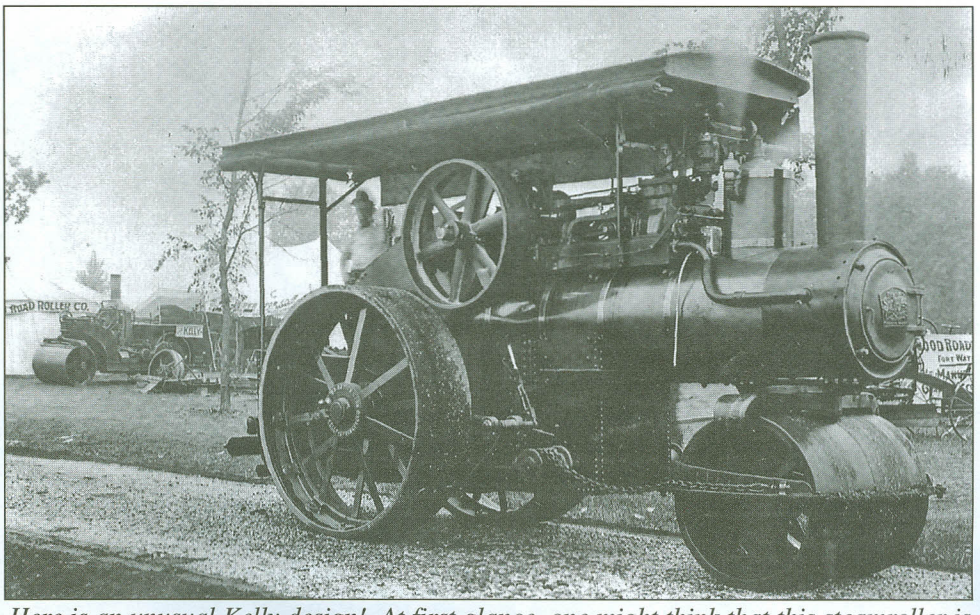
The National Pure Water Company of Kansas City, Missouri, placed the largest truck order of its day when the firm ordered a thousand Kelly trucks.

As mentioned in our previous article, the company in 1904 perfected the horizontal type engine that greatly improved the tandem model roller. Furthermore, in 1908, the firm built the first American-made tandem roller that employed an internal combustion engine. In 1909, the company offered two more rollers, three-wheeled types that also used gasoline engines. This was a very bold move as the internal combustion engine was in its infancy and needed many improvements. Prospective buyers were leery about spending large sums of money on a technology that had yet to be proven. The fact that the first order for a gasoline-powered roller did not occur until April of 1910 speaks volumes about the reluctance of customers to leave the tried and tested reliability of steam. All three of these early designs were successful and stayed in regular production until 1929 when they were retired in favor of new gasoline-powered rollers that were introduced in 1925.

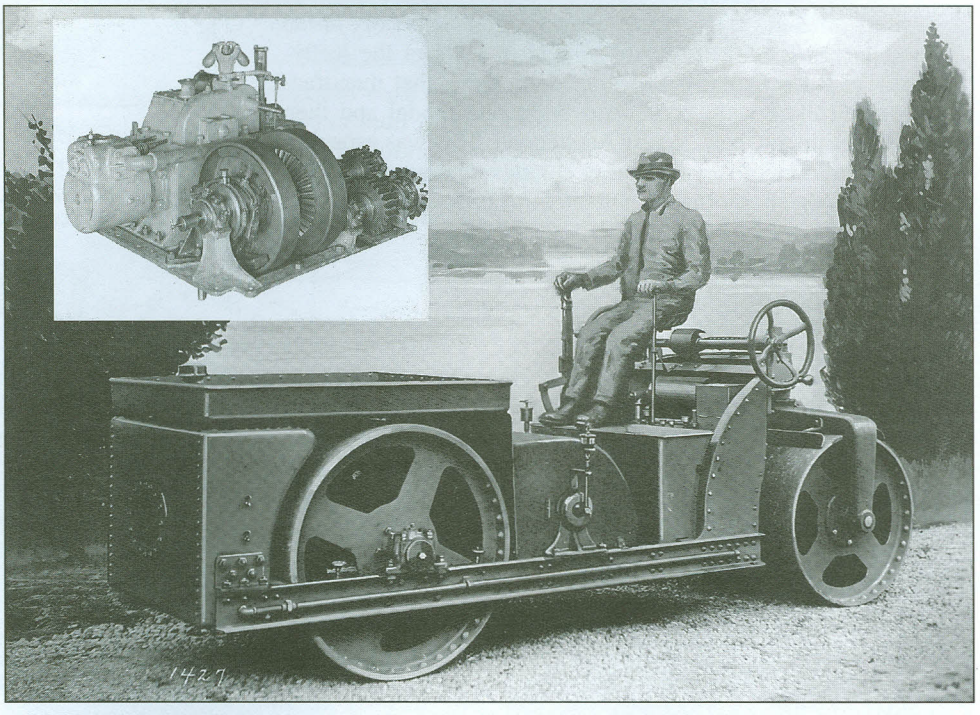
It is also interesting to note that many of these early gas-engine machines were returned to the factory between 1914 and 1920 because their owners wished to have them converted to steam! By 1930, the trend had reversed itself, as by this time the internal combustion engine had been perfected and now steamrollers were being converted to this more efficient type of power.

In all fairness, we should point out that not all designs or "improvements" were successful; for example, between 1913 and 1915, two new types of boiler designs were offered on the tandem rollers. These boilers employed submersible tubes and were of the "flat head" and "bump head" style. Apparently these proved to be unsatisfactory as, by 1920, virtually all had been returned to the Springfield factory where they were refitted with conventional boilers. Interestingly, a tandem roller fitted with a "flat head" boiler has survived into the preservation period!

After 1910, the conventional wisdom was that Kelly built not only the best tandem road rollers but also the best gasoline-powered rollers and that the Buffalo Pitts Company made the best three-wheeled steamrollers. For these reasons, it was only logical that these highly successful designs should all be built under the same roof. This occurred in 1916 when The Buffalo-Springfield Company was formed. The result was the creation of the undisputed American giant of the compaction industry. Today, this compa-



Here is an unusual Kelly design! At first glance, one might think that this steamroller is a product of the A. D. Baker Company of Swanton, Ohio, when, in fact, the roller is a Kelly dating to 1910. When this picture first surfaced, it was thought that the roller might be a modification of a Kelly traction engine, but a study of Kelly catalogs of the period revealed no traction engines with the features of this roller. This image shows this roller when it was premiered at the Michigan State Fair in August of that year. The engine is believed to be Serial Number 2324, which was completed on June 30th of 1910. This machine had a 6 3/4 in. bore and 10 in. stroke. There were five of these machines built by the close of the year, all having 80 in. flues. Starting in January of 1911, there were five more machines constructed that had 66 in. tubes, giving these machines a tighter turning radius. As these machines resembled designs offered by other manufacturers, sales were lackluster and this model was discontinued. Photo courtesy of Raymond L. Drake and Robert T. Rhode.



Here is America's first gasoline-powered road roller. This prototype, built by the Kelly-Springfield Company in 1908, was serial number #1951. It was powered by a two- cylinder air-cooled engine that had a 6 in. bore and 6 in. stroke. (See the inset.) In 1914 several modifications were made on the motor, but, even so, the general design remained unchanged until the mid-1920s when a water-cooled four-cylinder cross-mounted engine that was manufactured by the Waukesha Company replaced it. Photo courtesy of Raymond L. Drake and Robert T. Rhode.

ny, in its present form, is the worldwide giant in road roller production.

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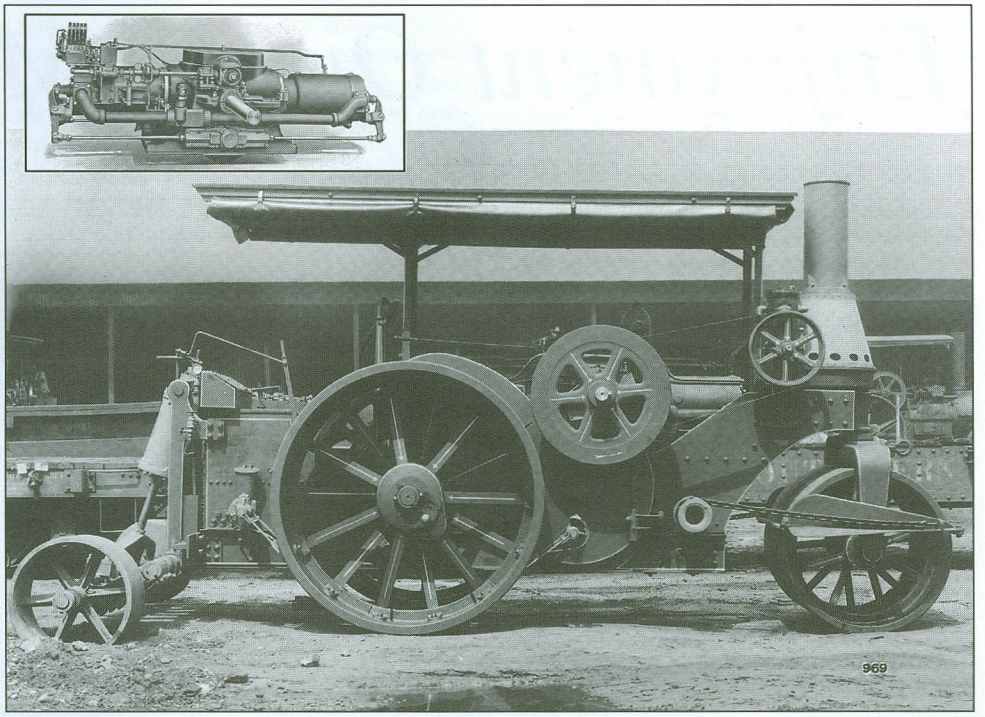
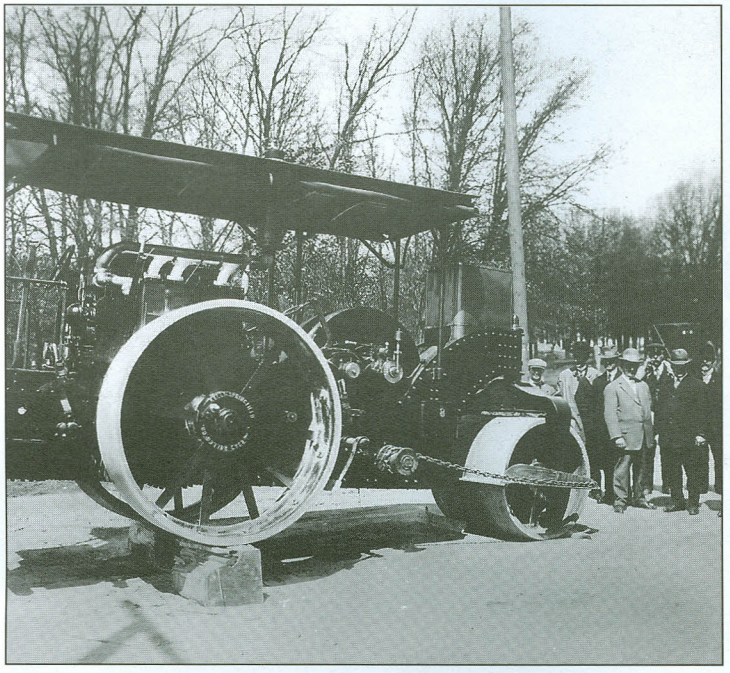
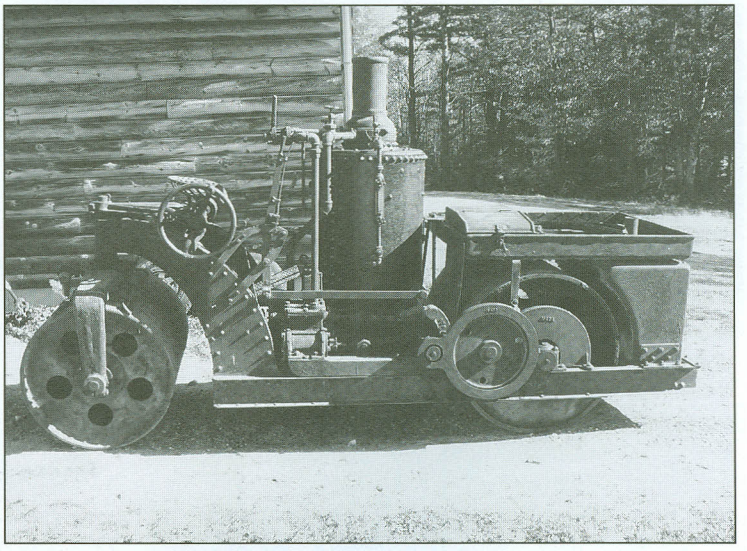


Right: In 1909, the Kelly company introduced two "three wheeled" rollers that used internal combustion engines. Here we see the machine that had a two-cylinder opposed engine. (See the inset.) These rollers were usually designed to run on kerosene or gasoline. Most of these rollers had either an 8 1/2 in. bore and 9 in. stroke or a 9 1/2 in. bore and 10 in. stroke and were rated as 10- or 12-ton rollers. When these were first introduced, there were two smaller sizes offered that were rated at 5 and 7 1/2 tons. Apparently, these were not popular as they were dropped from company catalogs in 1915. By 1929, when this design was retired, there had been 311 of the 10- and 12-ton rollers built. Photo courtesy of Raymond L. Drake and Robert T. Rhode.



While Kelly began building its first internal combustion engine rollers in 1908 and 1909, there was hardly any initial interest until 1910 when the city of Minneapolis, Minnesota, became the first purchaser of this new design. Here we see a "Big Four" roller being delivered to the city fathers on April 12th of that year. This was equipped with a huge four-cylinder engine that had a 7 in. bore and 8 in. stroke. This machine was Serial Number 2282 and remained in service until World War Two. Photo courtesy of Raymond L. Drake and Robert T. Rhode.



Here is an unusual roller that was fortunate to survive into the preservation era. Serial Number 2952 is owned by Peter DelPrato of Ashby, Massachusetts. This 5-ton machine was built on December 6th, 1913. This "flat head" submersible-tube boiler design was first offered on August 15th, 1913, starting with Serial Number 2902. Fifty-two rollers with this style of boiler were built until early 1914 when, starting on February 14th of that year, Serial Number 2990 was sold using a "bump head" type of boiler. Seventeen "bump heads" were manufactured until January of 1915 when this style of boiler was dropped altogether. Between 1916 and 1920, virtually all rollers equipped with these types of boiler were returned to the factory to be refitted with the standard boiler design. While the Kelly shop records clearly show that both "flat head" and "bump head" boilers were available as options for buyers, our survey of Kelly literature has turned up no advertisement promoting these options. Photo courtesy of Peter DelPrato.