

BUFFALO—SPRINGFIELD HISTORY

By
Chester Petrowsky
Of
Belchertown, MA

Originally Published
June 1966
Engineers & Engines
Magazine

OCR Version — All Text

BUFFALO-SPRINGFIELD HISTORY

by Chester Petrowsky of Belchertown, MA

Written and Originally Published in June 1966

This is the History of The Buffalo-Springfield Company of Springfield, Ohio. The Buffalo Steamroller Company (which was originally part of the Buffalo Pitts Company) merged with the Kelly-Springfield Company to form Buffalo-Springfield.

The original story was contained on pages 3 through 11 in the July/August 1971 edition of Engineers and Engines magazine (Volume 17 Issue Number 2). Brian Szafranski (Elma, NY USA) - the webmaster of BuffaloPitts.com - has OCR'd this original article to produce the written text that follows. Brian has agreed to donate this PDF version of the History of this well-regarded firm to VintageMachinery.org so that the story is available to a wider audience.

Brian made changes to improve readability, including: adding sub-titles to what can be a somewhat confusing story (because of the many different companies discussed, **not** because of poor writing); punctuation and grammar (minor changes by a fussy webmaster); and font , line spacing, etc. for legibility. This history has been very popular download at BuffaloPitts.com.

[Sidenote: To “OCR” is to scan a document into a computer and use an “Optical Character Recognition” program – thus the term “OCR” – to produce actual text from a scanned image of text. An Adobe PDF (Portable Document File) of a text-only document has much smaller file size than one created from all scanned images of the original magazine pages. That is, scanned pages are essentially all photographs and thus create a large PDF. So, Brian spent many hours correcting the text from the OCR process because the original scans were of somewhat poor quality, and had a font style and type size that did not OCR well.]

IMPORTANT NOTE: about half-way through page four of this document the topic turns to the other firms that were merged with Buffalo-Springfield. Thus, the story turns to topics of well drilling, etc. You may wish to skip over that text as it is somewhat unrelated to steamrollers and/or gasoline-powered rollers.

On the last page in this OCR-style document is a photo of the Buffalo-Springfield Steamroller belonging to Chester Petrowsky (the original author). Don't miss it.

Please note that the June 1966 and the July/August 1971 issues were not copyrighted. Further, this article was likely written by an author who was not paid. So, even if the magazine issue had been copyrighted, the original author would be considered to own the rights. Mr. Petrowsky was sent a letter asking for permission to reprint his History, article but the letter was returned.

Thank you for reading this informative article.

– Brian Szafranski, Webmaster of BuffaloPitts.com

BUFFALO – SPRINGFIELD HISTORY

July 1966

Courtesy Of Chester Petrowsky, Box216, Rt. 1, Federal St., Belchertown, Mass. 01007

The O.S. Kelly Company – Springfield Ohio

Prior to 1889, there were no road rollers manufactured in the United States, and very few in use, as the state of the roads would testify. Those that were used for urban service were imported from England. However, in 1889 the O.S. Kelly Company of Springfield, Ohio began experimenting with the design of such a machine.

The decision to enter into the manufacture of steam rollers was a logical one for this company. It had been building a steam traction engine for pulling rollers.

The first experimental self-powered steam roller resembled the English machines with large vertical boilers and a two-cylinder steam engine. It worked just well enough to encourage further study of the idea, badly enough to necessitate immediate redesign.

Considerably more time and thought went into the redesigned machine, and it wasn't until three years later that the O.S. Kelly Company produced the first of a long line of rollers.

The Kelly-Springfield Road Roller Company

Simultaneously with the introduction of the production model roller, in 1902, the Company changed its name from O.S. Kelly to Kelly-Springfield Road Roller Company, and the product was known as the Kelly-Springfield Roller.

During the first year of manufacture, the Company produced seven rollers, all of which, according to old literature, were still in active service eight years later and required very little maintenance.

In 1908, the Kelly-Springfield Company introduced a major advance in roller design when it developed the first gasoline-powered tandem roller in this country. This step is far more significant in retrospect than it was at the time, however, for it was many years before internal combustion became a serious threat to steam as a source of power in compaction rollers.

By 1910, production had risen to two rollers a day, every working day of the year, making the Kelly-Springfield Company the largest factory of its kind in the world. Superiority of product and its results were the reasons for the company's steady growth. According to company literature: "The Kelly-Springfield Road Roller was practically the only power driven machine employed, but the result of its work was so vastly superior in finish and durability to that obtainable by other methods that despite the extreme backwardness of the country as a whole in realizing the value of good roads, there has never been the

slightest cessation in the demand." Continuing: "Whenever you find a real good road, you run across the trail of a Kelly-Springfield Roller."

The Buffalo Pitts Company – Buffalo NY

The last point could well have been contradicted in Buffalo, New York. For here the development of the Buffalo Steam Roller Company was surprisingly similar to that of the Kelly-Springfield Company. It, too, had been producing a hauling unit known as the Buffalo Pitts Steam Wagon. And while O.S. Kelly's first experimental roller pre-dated the Buffalo Pitts roller, the latter was introduced as a production model in 1901 — a year earlier than the Kelly-Springfield machine. Its growth and popularity on the East coast also paralleled that of Kelly-Springfield in Ohio, though the latter's claim to being the largest in terms of production was probably justified.

The Buffalo-Springfield Company

Thus the two companies went their separate, though parallel ways — each helped by the slowly awakening demand for improved roads. An especially encouraging note was introduced in 1913 when the Federal Government proposed the building of 50,000 miles of national highways.

Then, in 1916, their separate paths drew more closely together than any two competitors had ever been before or since. The two companies decided to merge and form the Buffalo-Springfield Road Roller Company. In order to economize on manufacturing facilities, the Buffalo operation was moved to Springfield, but here they encountered a snag.

One of the Buffalo stockholders refused to sign the transfer agreement, and without his signature the merger could not be completed. For five years the dog-in-the-manger held out. And for five years the two "engaged" companies produced Kelly-Spring Road Rollers and Buffalo Pitts Steam Rollers under the same roof. This strange situation finally came to an end in 1921 when the "holdout" sold his stock.

Charles M. Greiner, who had started with the Buffalo plant as an office boy, eventually gained controlling interest through hard work, a rich brother, and a wealthy wife.

At the time of the merger he and his two sons, Carl and Edward, were almost sole owners. The Greiner family now gained controlling interest of the newly formed Company. However, his interest was more monetary than active. He never moved to Springfield and left the management of the new company to C.J. Foster, who had been his general manager at

Buffalo. This appointment was a kind of homecoming for Foster. He had served previously as general manager of Kelly-Springfield before leaving to take the same position in Buffalo.

Foster was elected to the Board of Directors at the time of the unofficial merger in 1916, and Charles Greiner was elected Chairman of the Board of Directors, and Carl F., his elder son, was appointed Secretary of the Company.

In 1917, the Company experienced a brief set-back when the plant was destroyed by fire. However, it was rebuilt within six months. Nor did it cause a financial crisis, for that same year the Board of Directors voted to pay out \$62,000 in dividends to be divided pro-rata among the stockholders.

The Company continued producing and selling rollers with a bare minimum of complications all through the 1920's. Competition was virtually non-existent. Model changes on existing models were few and minor.

However, a new model was introduced in 1922 which helped accelerate the trend toward internal-combustion power. It was a vastly improved, four-cylinder gasoline tandem roller with transmission gears enclosed in oil. This was a significant advance over previous machines in which many of its gears were exposed and operated dry. Another "First" that launched a trend was the location of the radiator at the side of the machine where it could breathe clean air, rather than dirt and grit from the job.

Orders were steady. Profits ranged between \$380,000 to \$561,000. Then came the crash of 1929 and the bleak business years that followed. Never once did the Company go into the red. Not one man was laid off. Profits did diminish during the 1930's to a low of \$39,000 in 1933, but this was the only year they dropped below \$100,000.

The acceleration of public works projects during this period served as an anti-depression buffer for the Buffalo-Springfield Company. An excellent example was the Pennsylvania Turnpike construction project in 1937. The State rented 135 Buffalo-Springfield rollers for compacting the base of this super highway. By the time they were returned, each of these machines had earned from \$12,000 to \$14,000 in rental fees. They were then sold.

In 1939, the Company made several major contributions to roller design. It introduced a new line of 6-cylinder gasoline tandem rollers. These rollers incorporated the best features of their predecessors and included, in addition, an all-welded frame, as well as welded, water-ballasted rolls. They also featured, for the first time, a single-reduction bevel gear final drive which permitted the power plant and transmission to be designed as a compact, integral unit. This sound, simple drive was placed on the side of the roller away from the operator, giving him a clear view of the work and permitting him to work close to curbs, walls and other obstructions.

That same year the Company developed the Trench Roller in response to the demand for wider pavements now being specified by highway departments. The trench roller was a three-wheeled machine with one heavy compaction roll. The road wheel could be raised and lowered mechanically, so that the compaction roll could be placed in a trench while the roller remained level. Demand for this machine increased steadily as highway specifications called for wider, safer roads.

All government bodies were Buffalo-Springfield customers. In addition to Federal and State governments, the Company enjoyed steady sales to County Municipal governments also. The government improved even further as a customer when, during World War II, the U.S. Corps of Engineers standardized on Buffalo-Springfield Rollers. Thus the Company continued doing, during the war years, what it did best — design and build rollers and again a sound compaction principle was introduced. For several years, Buffalo-Springfield engineers realized that the current two-axle roller compacted but did not smooth the surface, for the two rollers simply followed the rises and dips of the road bed. To correct this, the Company introduced a three-axle tandem roller that would level, rather than conform to surface irregularities.

In 1946 C.J. Foster resigned as General Manager of Buffalo-Springfield after serving the company in that capacity for 30 years. He was replaced by Carl Greiner who was also the president of the company at that time. Foster remained on the Board of directors.

Carl Greiner served as president and general manager of the Company until 1952 when he turned the general manager's reins over to John Harrison along with a vice president's title. Greiner remained as president. Harrison had been with the Company as an engineer for about 10 years.

In 1955 another new roller led to the birth of a wholly-owned Buffalo-Springfield subsidiary, known as the Compactor Company. The new roller was the model K-45. Its compaction rolls and drive consisted of a series of pads, rather than a smooth roll. Compaction worked on the interrupted pressure principle which added impact pressure to the compaction weight, and increased rolling speed and traction.

Anticipating an excellent demand for the Model K-45, the subsidiary Corporation was created to manufacture and sell the machine. It was done mainly for tax purposes. However, the theory was not tested long, for more sweeping changes were at hand.

Buffalo-Springfield & Koehring Companies

Charles M. Greiner, who was still a major stockholder, died this same year at his home in Washington D.C. With his large block of stock now available, the Koehring Company of Milwaukee purchased controlling interest in Buffalo-Springfield. On December 1, 1956 Buffalo-Springfield became a Division of

the Koehring Company and its subsidiary, the Compactor Company, was dissolved.

In August of 1953, the KV-25 Vibrating Unit was manufactured and there were no more units made until the KX-25E series in 1957.

Two years later the Buffalo-Springfield Division lost the services of a man who had played a major roll in Buffalo-Springfield's consistent financial success. C.F. Laybourn, comptroller, retired after more than 50 years of service to the Company.

Buffalo-Springfield Expands & Diversifies – Stardrill-Keystone Company

In 1959 the new Koehring Division began to diversify its product line for the first time in its history. For in February of that year, the Koehring Company purchased the Stardrill Keystone Company, manufacturers of well-drilling equipment and moved that Company's operation to Springfield five months later - July 1959.

The Stardrill-Keystone Company was no Johnny-come-lately on the manufacturing scene. Fourteen years before the first experimental roller was built by the O.S. Kelly Company, 1875, Robert Mages Downie, age 22, purchased a rig of spring-pole drilling tools and went into the business of exploring for bituminous coal, hoping to finance his college education in this manner. He wanted to enter the seminary and become a minister. The spring-pole was a bent sapling from which the tools were suspended. The operators supplied power for the down-stroke and the spring action of the sapling helped lift the tool on the up-stroke. It was slow, hard work. Five feet of three-inch hole was a good day's production.

Convinced there must be an easier way, he took a heavy wagon truck, mounted a small boiler and steam engine on it and built the first well-drilling rig to be powered and mounted on wheels. With his new rig, he was able to drill 5 or 6 inch wells at a rate of 40 or 50 feet a day — ten times as fast as hand labor and at about one-tenth the effort.

In September 1958, the first pneumatic-tired roller (the Model PSR-30) was introduced into the product line.

In 1879, Robert and his brother, John G. Downie, manufactured six or eight replicas of the original rig for the William Velte Company in Pittsburgh. This Company sold them for water well drills under the trade name Keystone. This arrangement eventually led to the formation of the Keystone Portable Steam Driller Company, Ltd. in Beaver Falls, Pennsylvania on February 2, 1882. The new Company was capitalized at \$20,000.

Robert M. Downie and John G. Downie were allotted \$10,000 worth of stock for patent rights, and Robert was elected

secretary and general manager — a position he held until his death in 1924.

While Downie was “drilling his way through college,” another lad, named J.W. Miller, was working as a tool dresser in the oil fields in Ohio. Like Downie, he felt the time required to build 2 standard drill rigs and erect derricks left much to be desired. He therefore set about to build a compact, self-contained spudder mounted on wheels in 1881. The acceptance of the rig led to the establishment of the Star Drilling Machine Company in Akron, Ohio, in 1889.

Thus, as in the case of the road roller manufacturer, two pioneer companies were born within the same decade, under similar circumstances and their paths were destined to meet.

Each company found its strength in the market for which the machine was first developed. Star Drill supplied the lion's share of spudders for shallow well drilling while Keystone continued to dominate the water well market. Both companies supplied fishing and casing tools.

Both companies also delved into the excavator business, were successful for a time, and then chose to concentrate on drills. Keystone introduced its “Skimmer” in 1912. Its bucket did not operate at the end of a dipper handle. Instead, it slid back and forward along a straight boom. While it was awkward by today's standards, it had the ability to dig in a perfectly horizontal plane. This was a timely virtue, for during this period many brick city streets were being torn up and paved. The Skimmer's level digging action handled this job so smoothly, that Washington D.C. passed a law that no machine except the Skimmer was permitted to tear up its streets. The Skimmer remained in the line with moderate, local success until 1949.

About the same time the Star Drilling Company developed the Star Power Shovel. It, too, worked on the Skimmer principle except that the bucket was fixed and the boom drew back into the machinery deck. The company called it the “turtle head, telescoping handle.” It was able to cut ditches 16 to 36 inches wide and served also as a crane.

Of the two companies, Star Drill was the more aggressive, and soon overcame Keystone's two years head start. For a brief period, the Keystone machine was steam operated while the new Star Drill used horsepower in the purest sense of the word. However, the Star Drilling Machine Company soon switched to steam and then about 1916 began furnishing its drills with gasoline engines of its own make, first with 1 cylinder and later with 4 cylinders.

As vehicles improved generally, so did the carriers on which the drills were mounted. The first models were mounted on wagon wheels and horse drawn. In the early 1900's, the first crude self-propelled units were introduced. They were mounted on steel tractor-type wheels. Refinements followed until, by 1924, the Company included in its line a truck-mounted spudder

and a unit propelled by a half-track, known as the Super Tractor Star.

During the 1930's the wooden frames gave way to steel and the manila rope was replaced by steel cable, but not completely. It was found that the elasticity of the manila rope provided a desirable snap-back action which contributed substantially to the digging action. It was necessary, therefore, to insert a length of manila "cracker" in the cable. The manila was later replaced by springs and finally by rubber.

While oil fields continued to be the prime market, the Star Drilling Machine Company enjoyed a fine and profitable reputation with various government bodies. The first pleasant association was on the Panama Canal Improvement Project in 1941. Here the Company put a few Model 271 full-crawler blast-hole drills to work along with other makes already on the job. They thrived on the competition, and by the time the project was finished, there were 29 "Stars" on the project, while all other makes had been removed.

During World War II, the Speedstar 71 was adopted as the standard water-well drill for the Armed Forces as a result of a drilling competition with a Bucyrus-Erie machine. The Company also furnished the British with a Model 271 blast-hole drill.

Probably the most significant advance since the switch from steam to gasoline was the introduction of the combination cable and rotary drill in 1948. This drill was designed and built by the Star Drilling Machine Company.

In 1950, another engineering development returned a tidy and effortless profit to the Company. Engineer George Heinisch developed and patented automatic, self-erecting braces for the Star Drill. This was such a desirable feature that other companies picked it up and paid \$17.50 in royalties for every rig sold.

Again in 1956, Stardrill-Keystone introduced the heavy-duty combination mud and air rotary drill for hard-rock water-well drilling. Although neither Franks nor Star Drill could claim to have originated the principle, Star Drill was the first to produce and promote it. So dramatic was its success, especially with water-well drilling contractors, that it brought a wave of competitors to the bandwagon.

The path followed by the Keystone Portable Steam Driller Company was somewhat less dramatic and less rewarding. After surviving its first winter (1882/1883) by a hairsbreadth, the newly formed company began to make sales. R.M. Downie, inventor of the drill and general manager of the Company, turned his gift of oratory (which he had wanted to use as a minister) into a gift for selling. He prepared his own literature, advertised in trade & farm journals, and spent much of his time on the road selling the entire output of the little plant single handedly. His salary was fixed at \$500 for the year in 1882, plus 20% on all cash sales and 15% on all time sales.

Under his leadership the business grew. Product improvements were made through the years. Many of them were patentable and all the patents were issued to R.M. Downie who signed them over to the Keystone Driller Company without special compensation.

During the first nine years of the Company's existence, stockholders had invested \$40,000, while they took out \$171,258.42 in cash & stock dividends — a 325% profit. These figures were noted in 1891 when the Company was rechartered under the simplified name of: Keystone Driller Company.

Sales continued to be good, the Company continued to profit, and the manufacturing plant continued to grow. Manufacturing began in the old Thornily Foundry and Machine Shop, a small stone building in Falston, Pennsylvania. In 1887, the Company purchased a wooden building with 350 feet of frontage on Eighth Avenue in Beaver Falls, Pennsylvania and closed the operation in Falston. The entire property covered about an acre and a half. An additional acre and a half of adjoining property was purchased in 1902. Two story buildings were erected on every inch of space. They were destroyed by fire and rebuilt in brick the following year.

The biggest single expansion of plant and property took place in December 1906 when the Keystone Driller Company bought 19 acres, occupied by an abandoned American Steel and Wire plant, for \$45,000. The most desirable part of the new purchase covered four acres adjacent to the existing Keystone property with frontage on the Marginal Railway. It was necessary to buy the rest of the property in order to get this much-needed parcel. Much of the remainder was sold off in later years. There were two usable buildings on the four-acre plot and others were added until by 1924 the entire area was under roof. This was the extent of the Company's physical growth.

On October 23, 1924, Robert Magee Downie died of complications following an appendectomy. The effect on the Company was that of uncoupling a locomotive from a fast-moving train. Momentum carried it forward for some time, but momentum does diminish.

The product was good enough to continue selling for many years, but no new, significant advances were introduced after the development of the Keystone Gas Drive Drills, which were powered by a 4-cylinder engine. They were introduced in 1923 and were the last R.M. Downie-inspired project.

For the next twenty years, the Company continued under the management of the Downie family, and dreamt about the past. World War II was no help. The Company had a contract to supply water-well drills to the U.S. Navy, but lost it to the Star Drilling Company's Model 71's. It later turned the tables on Star Driller, only to find out that fair exchange sometimes is a robbery.

The Star Drilling Machine Company had delivered 25 rigs to the Russians on the Lend-Lease plan. The next order was for 100 and Keystone won it. After making considerable expenditure preparatory to production, the United States Government shut off the Lend-Lease agreement with Russia and the order was cancelled. This misfortune applied a brake to the coasting train.

In a last attempt to regain the lost momentum after World War II, Ralph Geddes, president of the Company, hired efficiency experts to examine the business. After months of thoughtful study, they recommended that Keystone get out of the oil field business with their cable tool rigs. Keystone did, and the market in shallow fields suddenly mushroomed leaving easy, profitable pickings for the Bucyrus-Erie 36L, 28L, and 24L models. This was the last straw. By 1950 the Keystone Driller Company was in the hands of the receivers.

Harold J. Ruttenberg, an alert businessman, saw an opportunity to purchase the Keystone Driller Company from the receivers, liquidate it, and double his investment. But those original plans were never carried out. Instead, he became interested in the handsome invalid he had on his hands and began nursing it back to health. Under his guidance, the Company began to regain its lost momentum.

Soon after the trend for Keystone was reversed, Ruttenberg bought controlling interest in the American Steel and Wire Company, manufacturer of wire baskets and shopping carts. In doing so, he dealt with Weiner and Hokans, a Chicago management firm that had controlling interest in the Star Drilling Machine Company. This led to a series of meetings and, in 1952 — two years after Ruttenberg purchased Keystone, the two companies merged.

Ruttenberg continued to be the driving force behind the newly formed Stardrill-Keystone Company. Stardrill moved into the ample Keystone quarters in Beaver Falls. Its vacated plant in Akron, Ohio was sold for a tire warehouse.

The following year Ruttenberg bought the Acme Fishing Tool Company of Parkersburg, West Virginia. He later sold it back to its original owners but retained the right to sell the tools in export for the next ten years.

Product improvement got a new shot of energy after the merger. They continued to work with Franks Machinery Company in the production of rotary drills and sold about 100 between 1955 and 1959. Models 55 and 71, combination rotary and cable tool rigs, were the first to use anti-friction bearings throughout. But this did not seem to be enough. Stardrill-Keystone was losing money.

This led to the negotiations between Ruttenberg and the Koehring Company and the ultimate move to Springfield in July 1959.

Flaherty Equipment Co. — Pocatello, Idaho

Stardrill-Keystone was not the only acquisition to affect the Buffalo-Springfield Division in 1959, for that same year Koehring presented it with a second company: Flaherty Equipment Company, Pocatello, Idaho. Flaherty produced self-propelled chip spreaders and self-propelled power brooms.

Gene Flaherty, founder of the Company, had seen the construction industry from all angles before he tried his hand at manufacturing. His first exposure to the industry was in 1932 when he went to work for Terteling and Sons, a construction contractor in Boise, Idaho. His experience here was two-fold. In addition to giving him experience on construction jobs, this firm also owned an equipment-sales company. Thus, Flaherty had a good look at the industry from both sides of the order pad.

In 1946, he left Terteling to become a district salesman for Western Equipment Company, Pocatello, Idaho. After four years with Western Equipment, he began selling on a straight commission bases for Engineering Sales Service Company of Boise, Idaho.

One day, while making a call on the Carl E. Nelson Construction Company of Logan, Utah, Flaherty got an order for a crusher. It was a mouth-watering \$100,000 order. The only problem was, the company he was representing had no crusher account, so Flaherty set about to build a crusher for Nelson under the name of Flaherty Equipment Company. It was a good crusher, incorporating a new patented flow line.

While he was building the crusher, Gene Flaherty hired an assistant, Joe Aspitarti. It was a wise move, for Aspitarti quickly became the other half of a sometimes frantic two-man, hand-to-mouth operation.

Shortly after Joe was hired, the Flaherty Equipment Company received an order for a chip spreader and went to work developing it. This was not simply to be a copy of other spreaders currently available, for both Flaherty and Aspitarti knew the short comings of these machines and were confident they could improve on them considerably.

Their first model was built in 1952. It was typical of most potentially great new products — full of new features and “bugs.” Instead of shipping it as it was, they took it apart, “debugged” it and completely rebuilt it. This time it lived up to its potential completely and the new Company was in business.

In the following year, 1953, the Flaherty Equipment Company started building production models. Their output that year was six machines, all of which were sold.

The fact that they sold every machine they built was no surprise for, with their shoe-string beginning, the sale had to be made and a deposit received before production could be started. The first machine was sold as a result of publicity

which appeared in "Contractors and Engineers" magazine. The others were made on a strictly door-to-door operation.

Armed with a few hundred feet of homemade movie film, Flaherty and his wife would hit the road for as many as ten weeks at a time. They called on highway departments and on contractors whose names they found in the yellow pages. In their second year of operation, they sold 12 machines. This figure may not sound impressive at first, but what company wouldn't like to double its sales in one year? The third year sales jumped to 42, then to 90, 121, and 129 units in the three following years. By this time most highway departments had written their specifications around the Flaherty Spreader, for they proved to do a superior job and used far less aggregate than other spreading methods.

Financing was a constant problem for this young company, for Flaherty started with almost no capital and very few assets. Even his building was rented. Creditors had to wait until the machine (for which they supplied the parts and materials) had been finished and sold. Some were patient. Others were not. It was Joe Aspitarti's job to cope with this latter group, and supervise manufacturing.

Occasionally, a creditor would become more unmanageable than usual and Joe would have to call for "reinforcements." When this happened, Flaherty would leave his car at the motel in which he was staying at the time, fly home, pacify the creditor, and fly back to resume his cross-country tour.

A second type of spreader was produced in 1953. It was the Parson-Flaherty Windrow Spreader, designed to lay an even windrow of mixed material through bottom-dump doors. Norman Parson, an associate of Gene Flaherty's, owned the patents on the machine. The Windrow Spreader performed well, but sales were only moderate at best, and it was discontinued.

Other products that made brief appearances in the Flaherty line were low boy trailers, bins & conveyers, plus a second big crusher for Gibbons & Read in Salt Lake City, Utah. The latter was delivered in 1955.

In 1957 the Company developed a product that was to take its place along with the Chip Spreader as a permanent item. It was the Flaherty Power Broom, used to clean off roads in preparation for surface treatment, and to broom off excess chips behind the spreader. The machine was 23 feet long and built somewhat along the lines of a motor grader. It had a large rotary broom mounted "amidships" and a blower system to pick up the fine dirt that the bristles missed. The broom was interchangeable with a 10 foot blade permitting the machine to double as a grader on maintenance and light-construction jobs.

In the late 1950's Flaherty learned that the Koehring Company was interested in his products. Here was an opportunity to get the backing of an established sales

organization, and a chance for him to spend less time living out of a suitcase. In the past six years he had averaged 60,000 miles a year on the highway. Here, also, was an opportunity to get the financial backing that so many of his creditors had found inadequate. Thus, in 1959, the Flaherty Equipment Company became the Flaherty Manufacturing Branch of the Buffalo-Springfield Division of the Koehring Company.

New Products Lines at Buffalo-Springfield

The Buffalo-Springfield Division devoted its attention to assimilating and organizing the newly acquired equipment lines during 1960, but already new plans were underway at central office to add still another product line to the growing family.

Rooney Taylor, assistant to Julien Steelman, was of the opinion that companies could, and should, grow from within as well as by acquisition. In 1960 he was authorized to conduct a study of many industries in order to choose a product with a promising future that Koehring could develop and manufacture.

His report indicated that air cargo equipment offered the best potential. It had shown a steady growth pattern of 15% per year since 1955 and all indications pointed to the fact that this would increase to over 20% in the near future. Based on these facts, the Company decided to pursue this course further. In 1961, W.C. Benson was hired to form and head up a new cargo system group and guide its development. He had previously been with the Solar Division of International Harvester which manufactured ground support equipment. His background also included experience with the truck transportation and aircraft industries. The Company immediately launched a second, more thorough analysis of the chosen industry in order to determine product concepts. This study was completed in late 1961. Now it was time to begin product development.

The Buffalo-Springfield Division was chosen as the most desirable base of operation. For one thing, the Springfield plant was only 15 miles from Wright-Patterson Field — the largest user of air cargo systems in the world. For another, the Buffalo-Springfield engineering group was best qualified to develop this type of equipment. Top management at the Division also influenced the decision, for Ray Burton who had been the Division's general manager since 1959, had proved to be an aggressive manager in the development of new products.

Don Ajero, a Philippine engineer and an extremely imaginative inventor, was hired to work with Benson on specific product concepts. Still more studies followed and by the end of 1962, the Company was ready to start the development of two products.

The first was a Universal Power Conveyor. This was a flexible conveyor for loading the belly compartment of aircraft which reduced the size of the belly-loading crew from five men to two. The second concept was a Karry-All vehicle used for short hauls over the road from the shipper's dock directly to the

aircraft. The Karry-All had a low silhouette conveyORIZED deck with a power driver's cab that could swing off to the side of the truck bed. This gave the operator complete visibility permitting him to nose right up to the aircraft without bumping and damaging it.

Late in 1962 Cargo Systems presented a 40,000 lb. loading-truck concept to the Air Force and received a contract for the development of the machine. This led to the production of 40 such trucks.

Toward the end of 1963, Cargo Systems proposed to the Government a heavy duty conveyORIZED system. The proposed system was to be far more sturdy than the inadequate commercial systems then available. It was to be a modular type of system permitting 21 different items to be arranged in various combinations. It would also fit all overseas terminal requirements. They got the contract and built 9 such terminal systems through 1965.

During this period a managerial change took place at the Buffalo-Springfield Division. Ray Burton returned to the central office in Milwaukee in 1964 and was replaced by Harry Jeske.

More Road-Building Machinery Developed

With the Cargo Systems successfully launched, the Koehring Company turned its attention to its road-building equipment line. In 1966 it purchased the manufacturing rights to the Harnischfeger's Single Pass Soil Stabilizer. This dates back to the early part of World War II when, at Walter Harnischfeger's request, the research department began searching for new products which the Company could manufacture after World War II. It was determined that the field of soil stabilization had not yet been adequately exploited.

A search for such a machine followed, but was unsuccessful. The most promising machine then being built was the Flynn Road Builder. However, Mr. Ben Flynn, owner of the machine's rights, drove too hard a bargain and the two companies could not reach an agreement.

The research department then made a thorough study of all patents covering earth processing machinery. Here they found an interesting patent issued to a Mr. Talbot and a Mr. Thee. The machine described had a series of rotors set in a transverse position. It was capable of handling all stabilizing operations in a single pass. The principle seemed sound, but no machine had ever been built.

The Harnischfeger Corporation bought the patent rights and began developing the machine in 1943. The first experimental machine was completed in 1944 and shipped to Corsicana, Texas for testing on two soil stabilization projects. Here it developed considerable mechanical difficulty and was returned to Milwaukee in the fall of that year to be completely re-designed and re-built, incorporating all the required changes.

The re-built machine, labeled the FA-76, was then sent to Kansas in July 1945 on a rental purchase agreement with the Broce Construction Company where it worked satisfactorily.

While the FA-76 was being re-built and tested, the Harnischfeger engineers were developing a second machine incorporating further improvements — the Model LA-88. This machine was designed to cut an 8-foot-wide bed to a depth adequate to produce 8 inches of compacted material. It was powered by a 260 HP General Motors engine and had a smaller supplemental engine to operate the liquid-supply pumps. It became the first full production model.

Other models were added to the line. The LA-106 was designed to cut a 10-foot width while the EA-56 cut a 5-foot width and was intended to be used on smaller projects, or in combination on large jobs.

While both the machine and the principle were basically sound, its success as a profitable product was never fully realized. Most of the sales were made directly, for the Harnischfeger dealers were basically excavator men and their enthusiasm for this strange piece of equipment was "underwhelming."

This lack of enthusiasm was also shared by many at the home office where excavator-oriented men looked upon the stabilizer as a "poor country cousin." Its manufacturing facilities were constantly shifted from one area of the plant to another to make room for the more important excavators. And so it went until, in 1966, Harnischfeger sold its manufacturing rights to Koehring.

Franks Machine Co. – Enid Oklahoma

Shortly after the Stabilizer-rights acquisition, Koehring made another announcement which was to add still further to the Buffalo-Springfield product line. In May 1966 the Company purchased the Franks Machine Company of Enid, Oklahoma. This acquisition was, in effect, the reuniting of old friends for the Franks name had appeared along with Keystone on many a rotary drill nameplate.

From its inception, the Franks Machine Company had placed its primary stress on engineering and service. Even their choice of product evolved naturally: through giving people the kind of help they needed.

The Franks Machine Company was set up in 1923 in a 50 by 50 foot building in Enid, Oklahoma. It was a typical blacksmith and repair shop so necessary to any farming community. Above the door was a sign "*Horse Shoeing*." There was also welding equipment and one lathe. Farmers depended on the Franks Machine Shop to keep their machinery in running order. So did the local mills and elevators.

By 1925 the shop had outgrown its facilities and moved to a larger building, and the nature of its business began to

change. Several oil exploration companies in the Enid area began taking their drilling equipment to Franks. At first the jobs involved routine repair and maintenance. There were core drill bits to be sharpened, simple welding to be done, and pumps to be repaired. But activity steadily increased, and so did the demands on the Franks Company.

In 1927 Joe Franks joined his father, George, and was active in the design and manufacture of drilling equipment thereafter. The first assignment of an engineering nature came in 1930 when, at the request of a drilling firm, the Franks Machine Company converted an old stationary core drill into a portable truck-mounted rig, complete with its own derrick, power unit and pump.

Drilling activity, especially seismograph exploration, was growing steadily. And Franks was, by this time, established as the place to go for both repair and engineering help. Through the work, the Company gained experience, and the experience led to still more demanding work. Thus the Company grew.

In 1933 it designed and completely built the first Franks Seismograph Drilling Machine. It was designated Model A. Other models followed in rapid succession, for each new model built incorporated new improvements, and each was given a new model designation until they reached Model F. This machine was popular with oil companies and drilling contractors. Many were built with only minor adaptations requested by the purchasers.

During World War II, the Company devoted over 90% of its time to war work. Drill production dropped to one or two rigs a year. The bulk of the work was machining parts for truck winches, bearing housings & casings, and supplies for portable pipe lines.

After the war, the drilling and seismograph activities started up with renewed vigor. Franks began machining parts for rotary drills which were gaining rapidly in popularity. This was done for the George E. Faling Company on a subcontract basis, and the experience gained here led to the introduction of the Franks Rotary Water Well Drill in the late 1940's.

The Franks Machine Company grew rapidly during the immediate post war years. One organization, contributed substantially to this growth: the Layne Organizations, a nation-wide network of drilling contractors that purchased nearly all of their rigs from Franks.

It was also during this period that it formed a profitable association with the Star Drilling Company when it designed and built the first Speedstar Combination Cable and Rotary Drill.

Many other drilling techniques were pioneered by the Franks Drilling Company during this period, for the Company had never deviated from its basic philosophy — that of being drilling equipment engineers and builders — first and foremost.

Among the improvements the Franks Company pioneered were: air circulation to carry away cuttings (1953); reverse circulation drilling (also 1953); and down-the-hole pneumatic air tools (1957). Later they introduced high-pressure pneumatic drilling which would drill in 4-hours what it used to take a cable tool 2-to-4 weeks to complete. Many one-of-a-kind specialty rigs were also designed and built by Franks for specific applications.

What The Future Holds – As Seen In 1966

Today, the Enid plant has 40,000 square feet under its roof. It employs 40 to 45 people and produces 15 different models of drilling equipment for the water well, petroleum, mining, and construction industries. Sales volume has ranged between \$1.4 and \$1.6 million per year during the 1960's.

What does the future hold for this Division? The products are many and diversified, but they have one important thing in common. The growth of our nation depends on this equipment.

The demand for broader, smoother, safer highways is greater now than ever before in history, and Buffalo-Springfield compaction equipment remains the standard of the industry.

The move to the suburbs has created a growing demand for water-well drilling equipment. There has also been a marked change in the post-war drilling contractor. Before World War II, he was usually an enterprising farmer who bought a small cable-tool rig and drilled wells part time for his neighbors. Today he is a full-time operator using bigger, faster, and more expensive equipment. Buffalo-Springfield Division drills will be called upon to meet the demand for more and better equipment.

In 1965, the Cargo Systems group started developing a commercially-oriented marketing organization to cultivate the limitless potential offered by industry, in addition to the business already generated through military and other government agencies. Although this group is still feeling its way, there are many large orders pending. In the mean time, military orders continue to grow. Through the first half of 1966, \$750,000 worth of equipment has been shipped and there remains a backlog of \$2,200,000. How far will it go? No one knows, but the future is promising - for this and the whole Division.

A Follow-Up Letter to the Article

[The following letter was published in a subsequent issue of Engineers & Engines magazine. It's included here to make this article more complete. – the webmaster]

Dear Mr. Petrowsky,

I have just read with much interest your History of the Buffalo-Springfield. However, there is one comment that I would like to make. The O.S. Kelly Co. did not change their name when the Kelly Springfield Roller Co. was established. The roller was developed by O.S. Kelly Co. and then sold to Joe Cartmel for a sum of \$75,000.

Joe Cartmel then set up the roller business in a part of the old East Street shop buildings where they are still located. The new venture was given the name Kelly-Springfield Roller Co. The O.S. Kelly company continued on under the same name, and really they are still operating under that name. At the present they do some grey-iron custom casting, but their main business is piano plates .

I am not sure just when they discontinued building steam traction engines and threshers, but I believe it was around 1918 or 1920 when this happened. Mr. Carl Ultes, President of the O.S. Kelly Co., is a good friend of mine, and his wife is a granddaughter of O.S. Kelly himself. They have a lot of the old company records which are very interesting.

A friend of mine has two tandem rollers, made during the transition of the two companies, one is Kelly and the other Buffalo. Thanks for a good story.

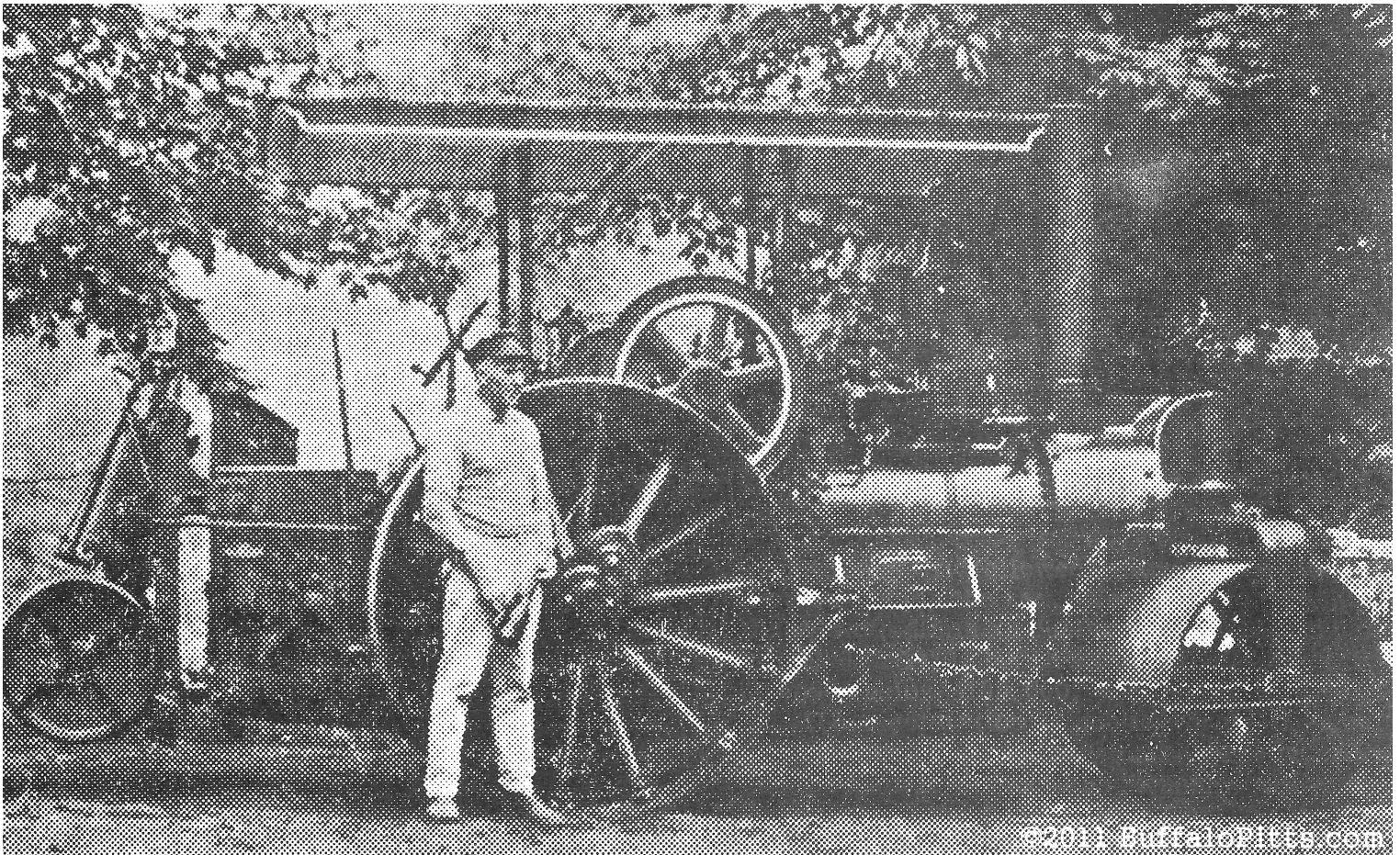
Sincerely,

Chas. C. Johnson

(no city & state were given)

See the next page
for a photo
of the author's
Buffalo-Springfield
steam roller.

The Author's Finely-Restored Buffalo-Springfield Steam Roller



IT'S A BUFFALO SPRINGFIELD

Gracing the Granby Bicentennial parade will be this
1920 Buffalo-Springfield steam roller,
rescued from a junk yard four years ago and restored by
Chester Petrowsky of Federal St., Belchertown.
Now a valuable antique, it will be a part of the
Granby Highway Contest of the
Bicentennial Parade Sunday.

Photo by The Holyoke Transcript Telegram.

Photo is courtesy of Chester Petrowsky
Box 216, Rt. 1, Federal Street, Belchertown, MA 01007

The above caption is from the original as-published story.

End.

Thanks for reading!