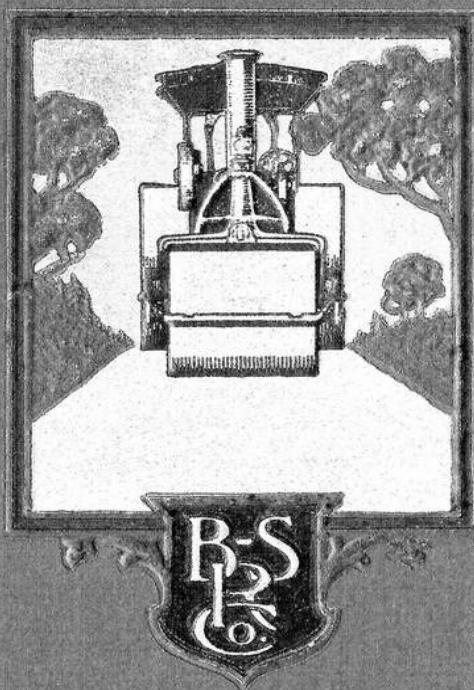


# ROLLERS

STEAM AND MOTOR DRIVEN



THE BUFFALO-SPRINGFIELD ROLLER COMPANY  
SPRINGFIELD, OHIO

COURTESY OF [BUFFALOPITTS.COM](http://BUFFALOPITTS.COM)

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BUFFALO, N. Y.

# THE BUFFALO-SPRINGFIELD ROLLER COMPANY

SOLE BUILDERS OF

BUFFALO-SPRINGFIELD STEAM AND MOTOR ROLLERS  
KELLY-SPRINGFIELD STEAM ROLLERS

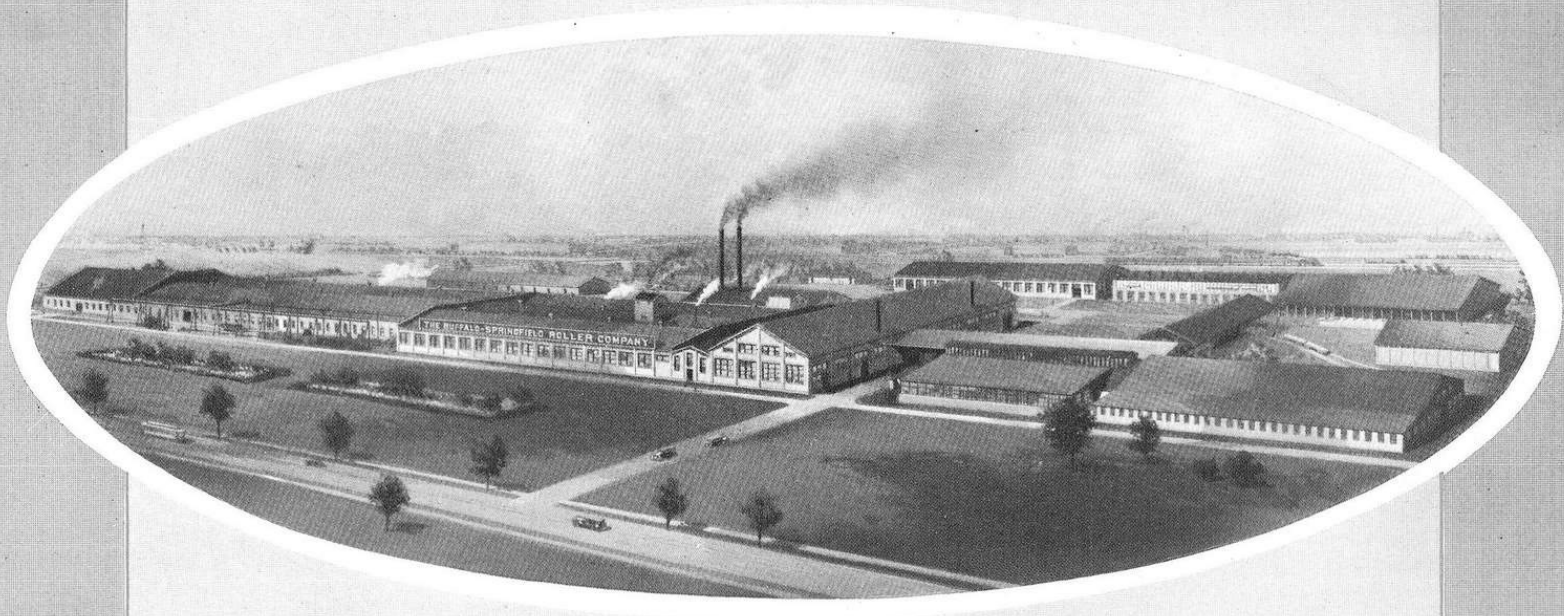


For further particulars, prices, etc.

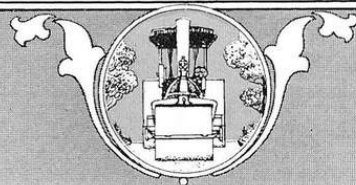
GEORGE W. WHITE, District Agent  
9214 Baring Street, Philadelphia, Pa.

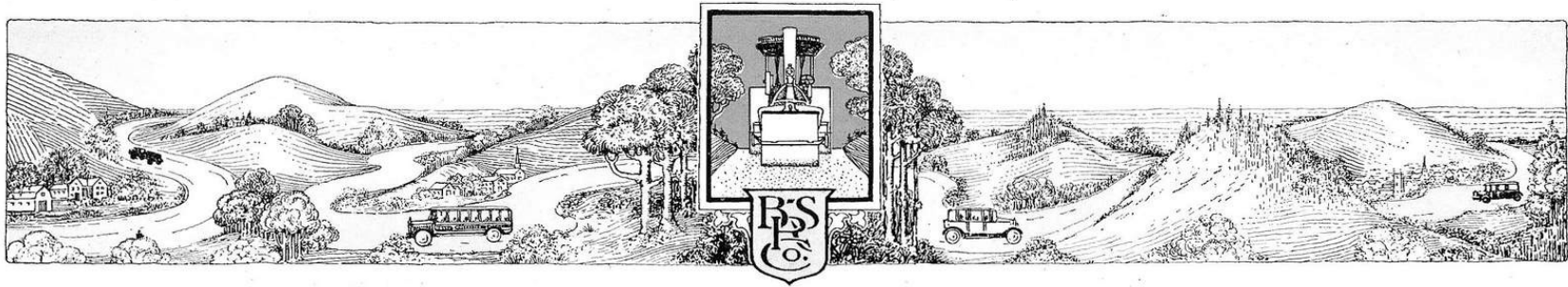
FACTORY AND GENERAL OFFICES  
SPRINGFIELD, OHIO, U. S. A.

Cable "ROLLER-SPRINGFIELD"—Western Union Code—Bentley Code



MAIN OFFICE AND FACTORY  
SPRINGFIELD, OHIO, U. S. A.





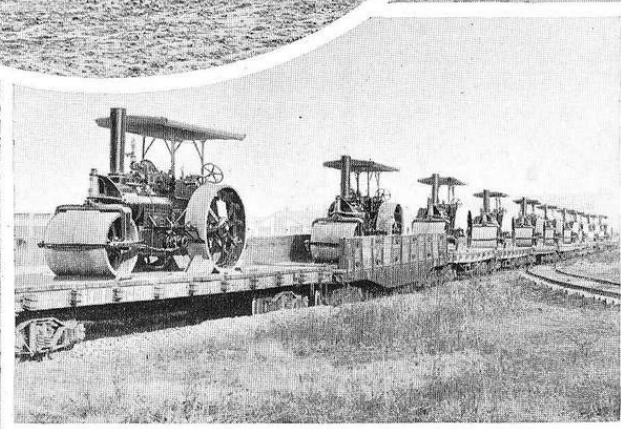
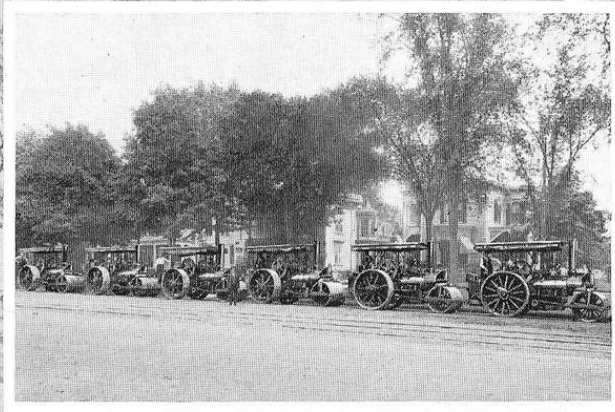
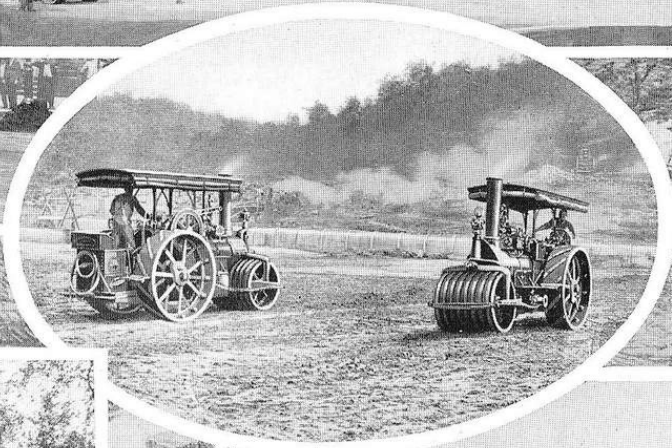
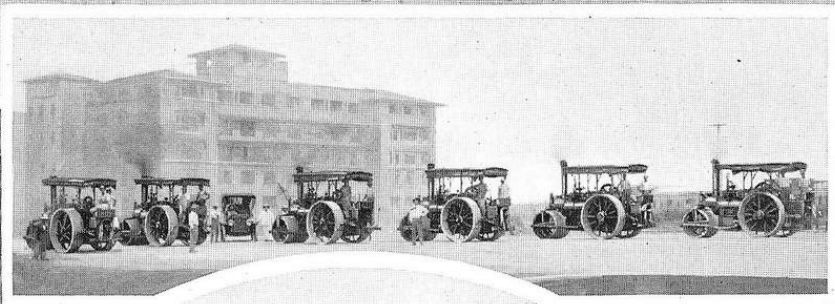
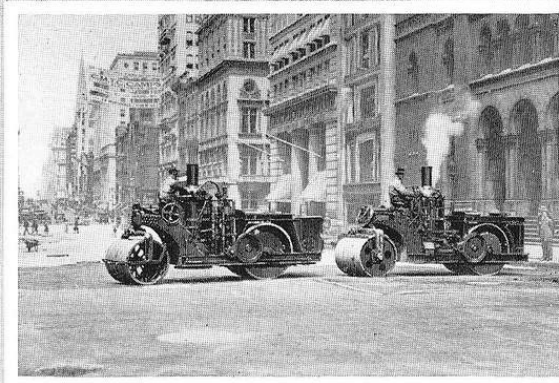
## TO ROAD AND STREET ROLLER USERS

**T**HIS catalog is issued by The Buffalo-Springfield Roller Company to show the types, sizes and uses of Buffalo-Springfield rollers and to give a brief description of the various models.

We rest our claim of the superiority of Buffalo-Springfield machines on the two facts that more Buffalo-Springfield rollers are bought than all other American makes combined and that over two-thirds of the purchases of these machines are repeat orders from those who have had previous experience with Buffalo-Springfield rollers and Buffalo-Springfield service.

It is not expected that our prospective customers will devote the time necessary to conducting an exhaustive investigation of the minute mechanical details of construction, but we do believe that they will credit this company with the earnest desire to place in their hands rollers of the highest excellence of design, workmanship and material.

That this company is in a position to furnish the best rollers is obvious when it is considered that for more than thirty-five years it has devoted itself exclusively to the production of such machines; that its plant has been built and equipped solely for roller manufacturing; that its management, engineers and workmen are most experienced and have but a single purpose—the building of the most reliable, durable and useful rollers possible. This specialization, which is unique in the road roller field, enables this



BUFFALO-SPRINGFIELD ROLLERS

PAVING FIFTH AVENUE, NEW YORK  
OWNED BY CITY OF SPRINGFIELD, MASS.

PUDDLING BOTTOM OF RESERVOIR

ROLLING THE LUNETTA, MANILA, P. I.  
IN TRANSIT TO CUBA

# THE BUFFALO-SPRINGFIELD ROLLER COMPANY

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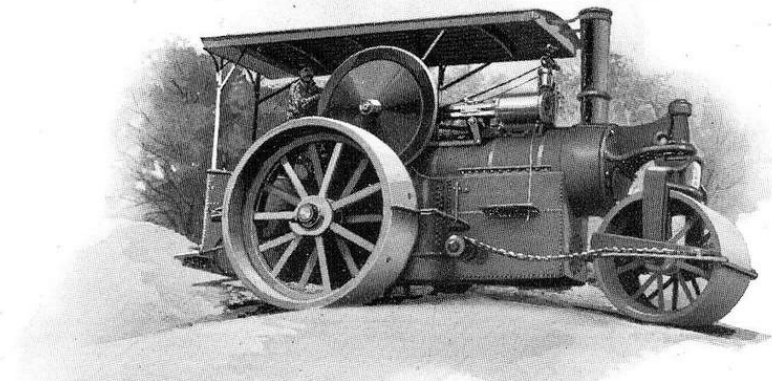
company to build rollers of the highest quality and at the same time give to its customers the benefit of quantity production.

The success of The Buffalo-Springfield Roller Company has been, and is, dependent wholly upon the esteem in which its products and its service are held by the constructors and engineers who have the selection of road and paving machinery. Hence, it is apparent that this company can leave nothing undone that will maintain and enhance the good will of its customers. In the choosing of Buffalo-Springfield rollers, the buyer can be assured of receiving the best obtainable—the result of over a third of a century of experience in roller development.

Specifications describing the details of construction of any of the models of rollers shown or mentioned in this catalog will be furnished on request.

THE BUFFALO-SPRINGFIELD  
ROLLER COMPANY  
SPRINGFIELD, OHIO

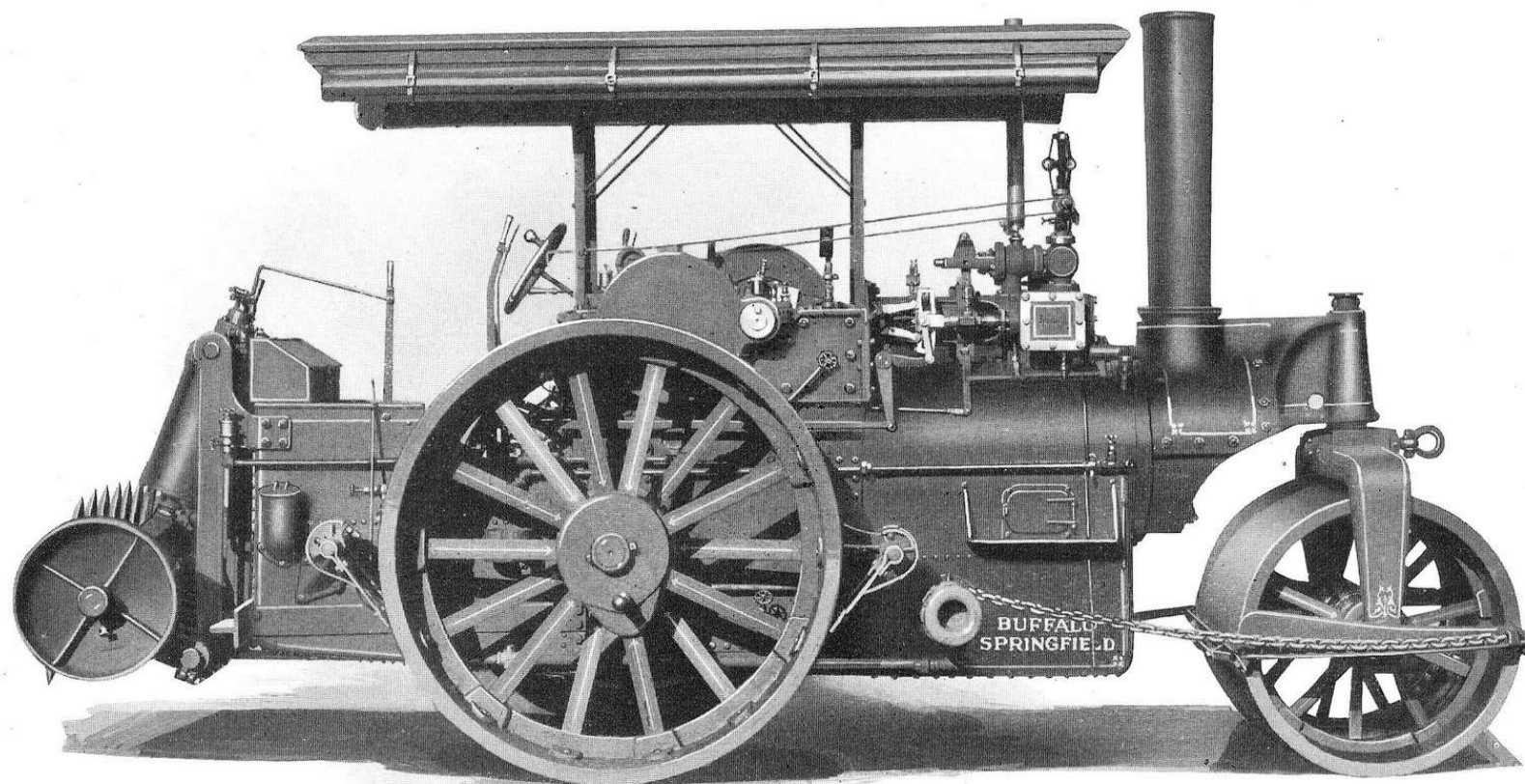
A PLANT  
EQUIPPED SOLELY  
FOR ROLLER  
MANUFACTURING



BUFFALO-SPRINGFIELD STEAM AND MOTOR ROLLERS

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BUFFALO-SPRINGFIELD  
THREE-WHEEL  
STEAM ROLLER  
WITH  
PRESSURE SCARIFIER





## BUFFALO-SPRINGFIELD THREE-WHEEL STEAM ROLLERS

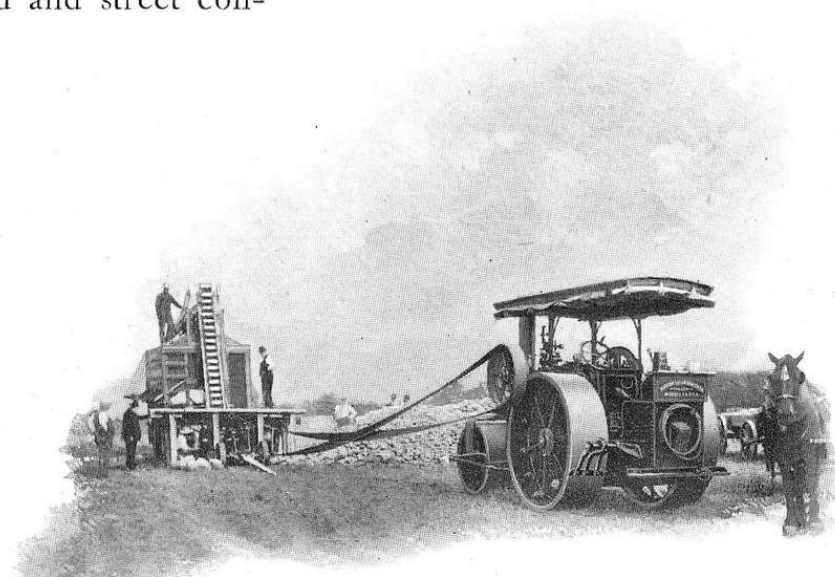
**B**UFFALO-SPRINGFIELD three-wheel steam rollers are more extensively used than any others. The first three-wheel steam rollers used in America were imported from England between the years 1870 and 1890. During the early "nineties" five makes of three-wheel steam rollers were produced in the United States, of which all but two were discontinued before the year 1905. The two survivors were the Buffalo-Springfield and the Kelly-Springfield, both of which are now products of this Company.

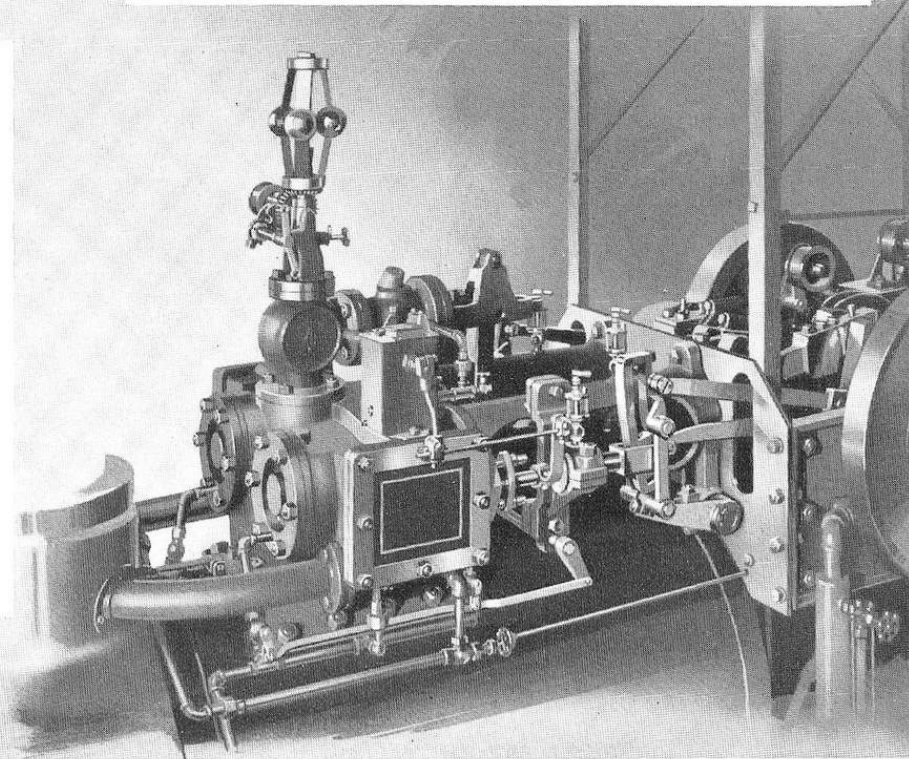
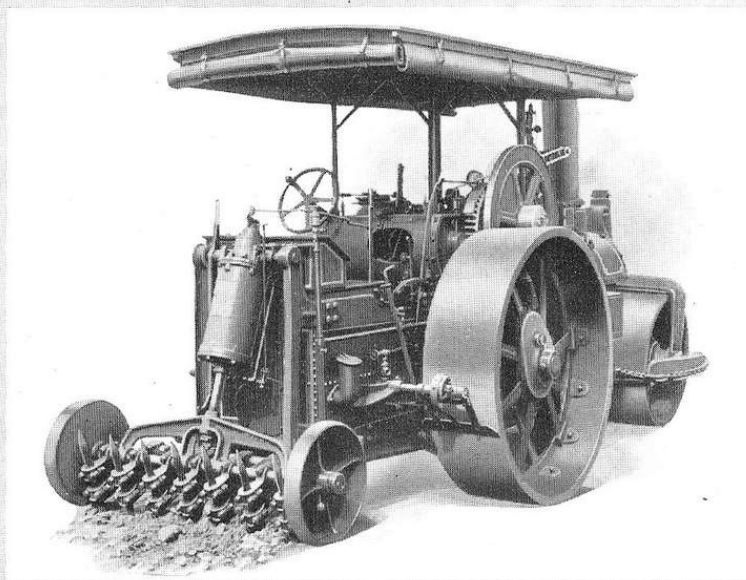
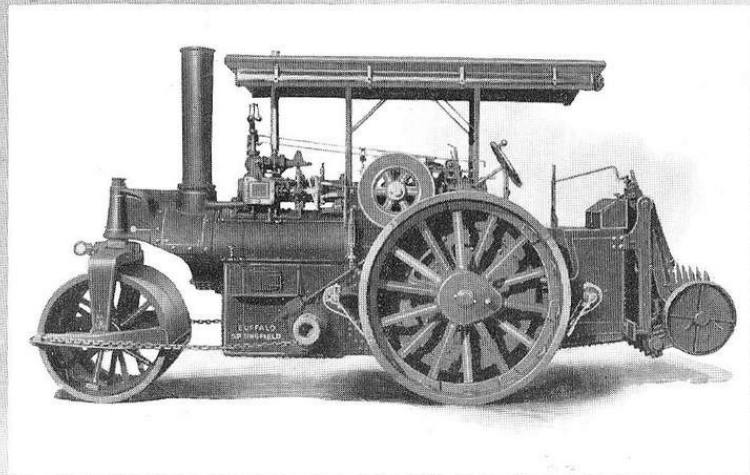
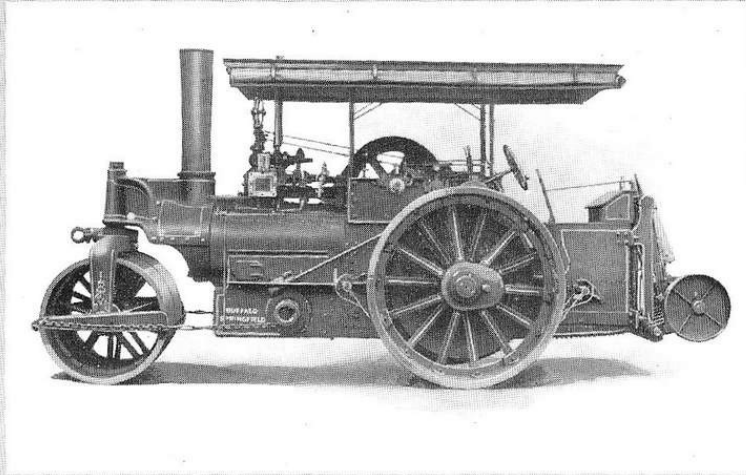
These embody all the most desirable features of their fore-runners as well as the improvements in materials and design that years of experience have taught are desirable in steam rollers to meet the demands of modern road and street construction and maintenance.

The boilers of all Buffalo-Springfield steam rollers are made in accordance with the laws of all states regulating the construction of steam boilers to be operated within their boundaries, and they are built and tested under the supervision of a commissioned inspector for such states.

The engines of all Buffalo-Springfield steam rollers are of the twin-cylinder type with

THE SURVIVAL OF  
THE PIONEERS





DOUBLE ENGINE AND THREE SIZES OF BUFFALO-SPRINGFIELD THREE-WHEEL STEAM ROLLERS

# THE BUFFALO - SPRINGFIELD ROLLER COMPANY

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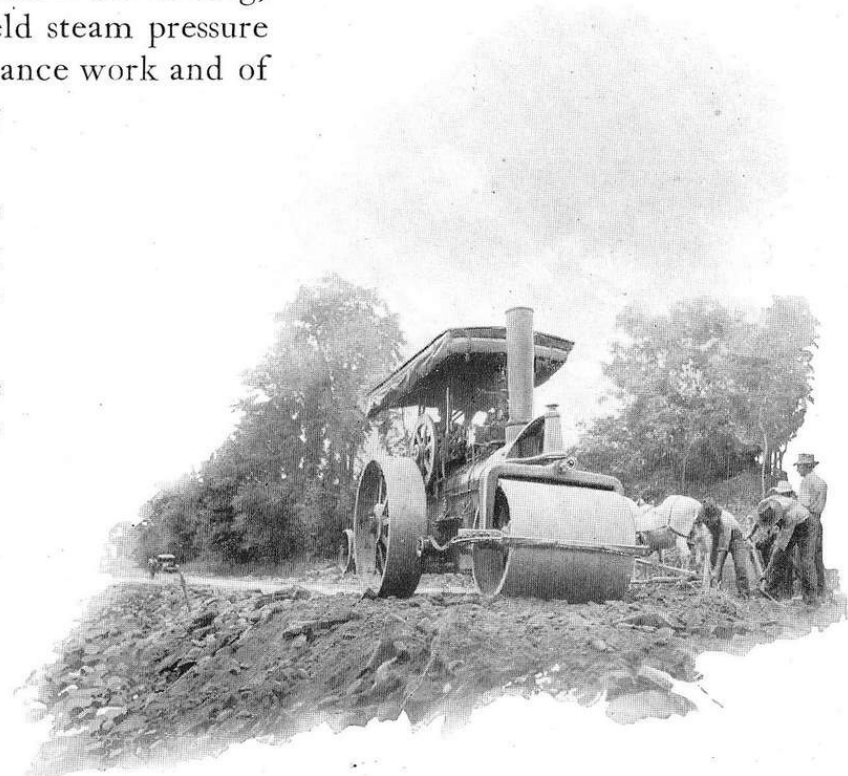
reversing valve gear. Change speed gears are also a feature of all Buffalo-Springfield three-wheel rollers. The transmission gears are of high carbon steel mounted on steel shafting accurately turned and lapped, and running in renewable bearings. The main axle is of special alloy steel of extraordinary strength. The periphery of the drive wheels of all Buffalo-Springfield three-wheel rollers is pierced by a number of taper-reamed holes for holding picks or lugs, which may be used in breaking old pavements or to give added traction. When such picks or lugs are not in use the holes are closed by accurately fitted plugs.

In addition to the usefulness of these machines for rolling, they can be equipped with Buffalo-Springfield steam pressure scarifiers rendering them capable of maintenance work and of preparing in the most economical manner the subgrade for new construction.

Many Buffalo-Springfield steam rollers are used with special wide wheels for rolling bituminous and asphaltic pavements, including the first rolling of sheet asphalt.

Buffalo-Springfield three-wheel rollers are built in sizes ranging in weights from ten to twenty tons.

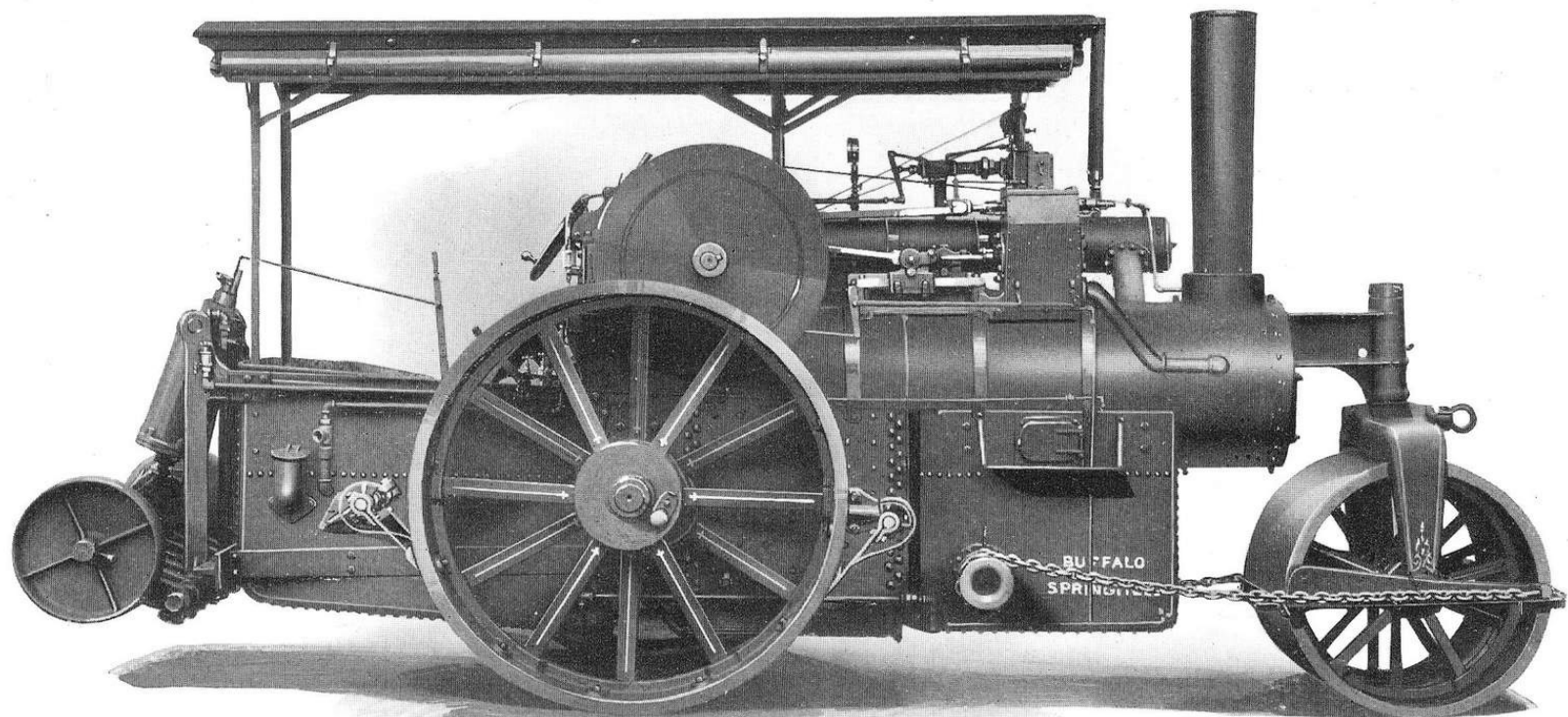
STEAM PRESSURE SCARIFIERS  
CAN BE ATTACHED  
FOR SPECIAL  
MAINTENANCE WORK



BUFFALO-SPRINGFIELD STEAM AND MOTOR ROLLERS

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KELLY-SPRINGFIELD  
SPECIAL THREE-WHEEL  
STEAM ROLLER  
WITH  
PRESSURE SCARIFIER



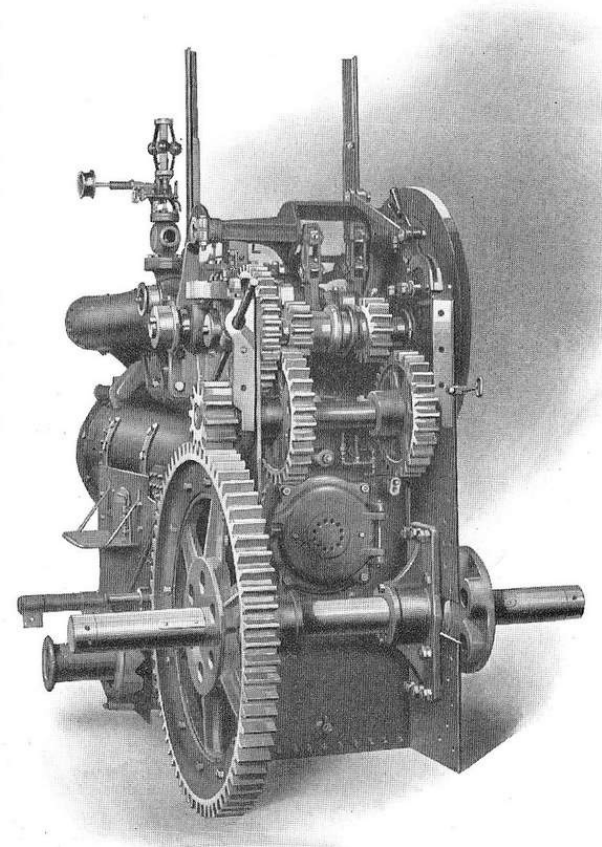
## KELLY-SPRINGFIELD THREE-WHEEL STEAM ROLLERS

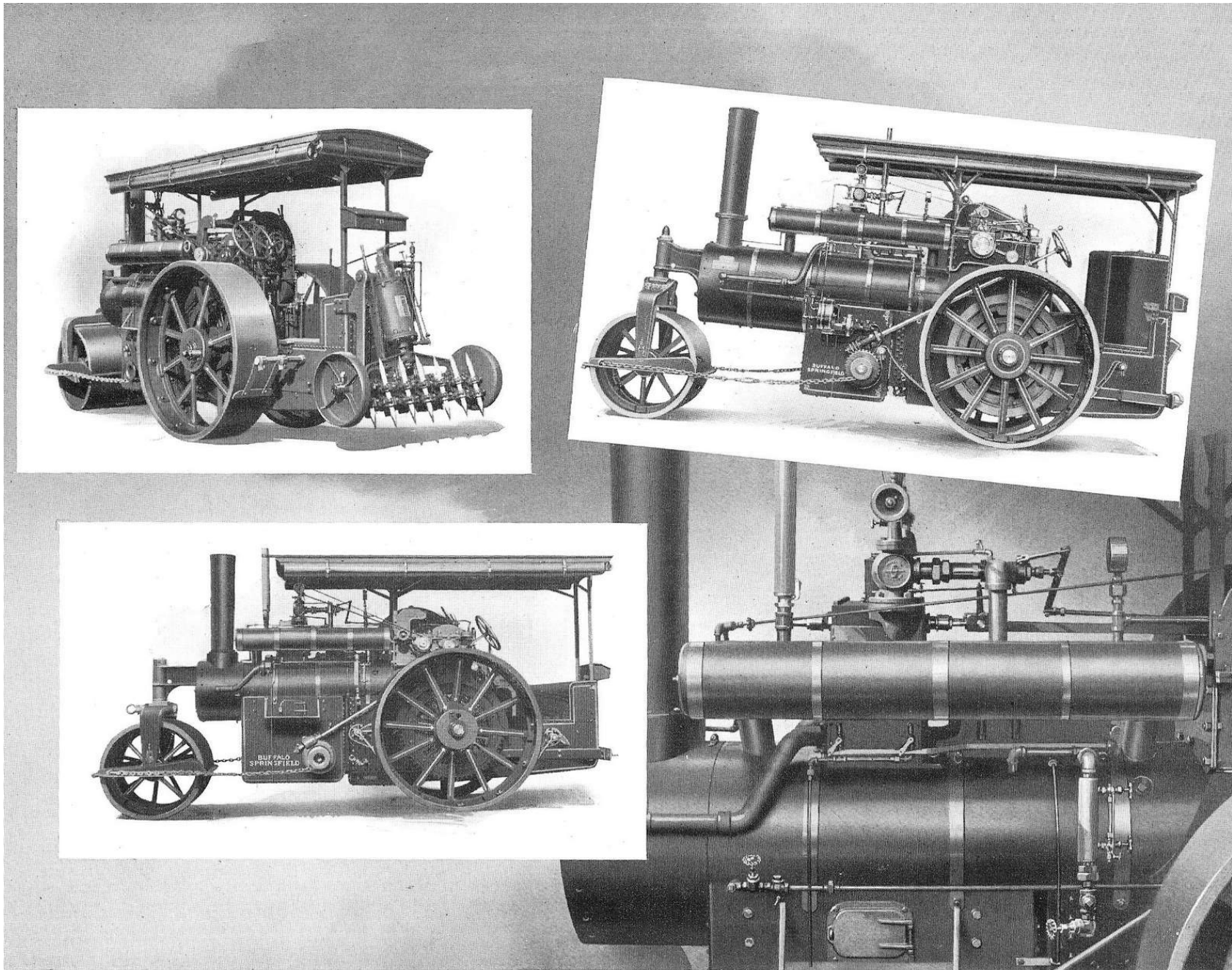
KELLY-SPRINGFIELD rollers are made with the same high quality of workmanship and materials that enter into the construction of all Buffalo-Springfield rollers and differ from the foregoing only in design.

The unique feature of a Kelly-Springfield roller is the long steam compartment extending above and parallel to the boiler shell and connected to it by hollow columns at each end, permitting dry steam to reach the engine cylinders when the roller is working on steep grades regardless of which end of the boiler is the higher. This steam compartment is thoroughly insulated with non-heat conducting materials to further insure dry steam for the engine cylinders.

Kelly-Springfield rollers have for many years been the choice of road builders throughout large areas of the United States, not only on account of their utility for nearly all classes of rolling but because of their remarkable durability. The first Kelly-Springfield roller ever manufactured is now in use after thirty-five years of service. A picture of that machine is shown on page 6. The simplicity of the design and its large wearing parts reduce wear to a minimum, and hundreds are used season after season without any expense for repairs or renewals. This reliability, which is characteristic of all rollers produced by The Buffalo-Springfield Roller Company, should be given the

THE LONG, DRY STEAM  
COMPARTMENT  
PERMITS USE  
ON STEEP GRADES





STEAM COMPARTMENT AND THREE SIZES OF KELLY-SPRINGFIELD THREE-WHEEL STEAM ROLLERS

# THE BUFFALO - SPRINGFIELD ROLLER COMPANY

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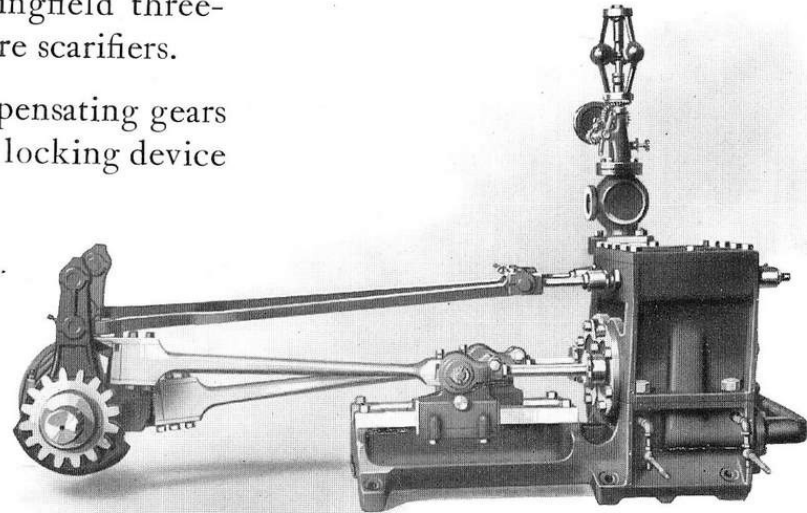
greatest consideration by the prospective purchaser. The failure of a roller at a critical time may, through delay of the orderly progress of the work, cause huge losses even though the cost of the repair itself may be small. It is to this reliability that Buffalo-Springfield rollers owe no small part of their success and favor in the esteem of roller users. Furthermore, this Company maintains service supplies and operators that are at all times at the command of its customers.

Kelly-Springfield rollers, in common with all steam rollers that are built by The Buffalo-Springfield Roller Company, may be equipped to burn wood or oil. On the opposite page is shown a large size Kelly-Springfield roller equipped for crude oil burning. The others are fitted with coal-burning grates.

Kelly-Springfield rollers are made in sizes ranging in weight from ten to sixteen tons. Like all Buffalo-Springfield three-wheel rollers, they can be equipped with pressure scarifiers.

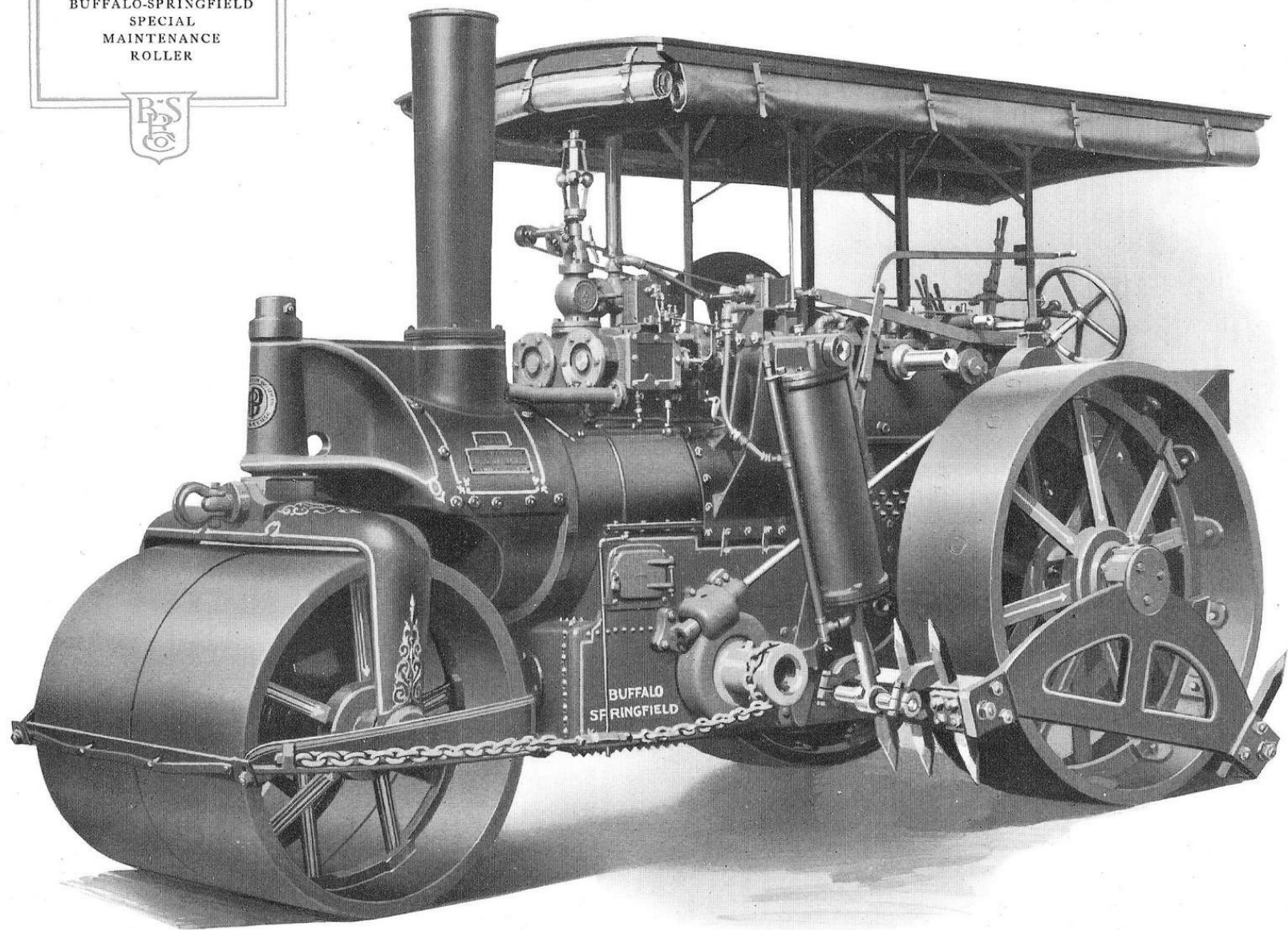
Kelly-Springfield rollers are furnished with compensating gears when so ordered. Such gears are provided with a locking device which when used causes both drive rolls to turn with the axle. This is preferred by most operators for ordinary hauling and rolling. The pinions of the compensating gear are completely inclosed in an oil-proof case to insure thorough lubrication and protection from injurious materials.

CAN BE  
EQUIPPED  
TO BURN WOOD  
OR OIL



BUFFALO-SPRINGFIELD STEAM AND MOTOR ROLLERS

BUFFALO-SPRINGFIELD  
SPECIAL  
MAINTENANCE  
ROLLER





## BUFFALO-SPRINGFIELD SPECIAL MAINTENANCE ROLLERS

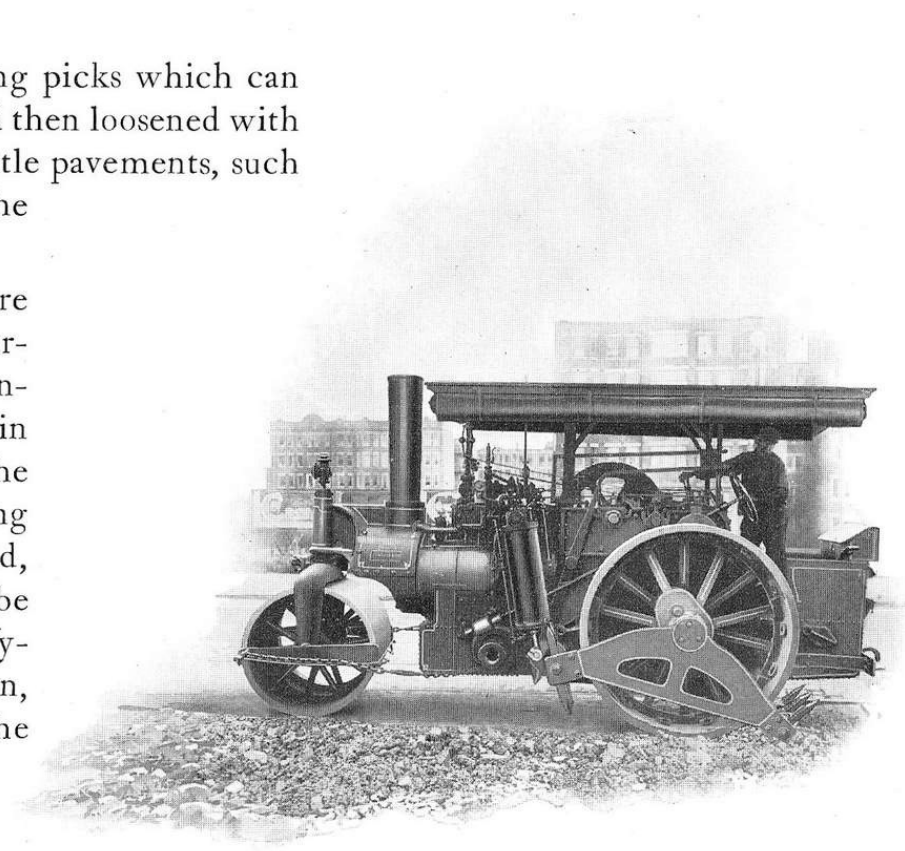
**B**UFFALO-SPRINGFIELD Special Maintenance Rollers have been used for many years by municipalities and by contractors specializing in work involving unusually difficult scarifying and rolling with high compression.

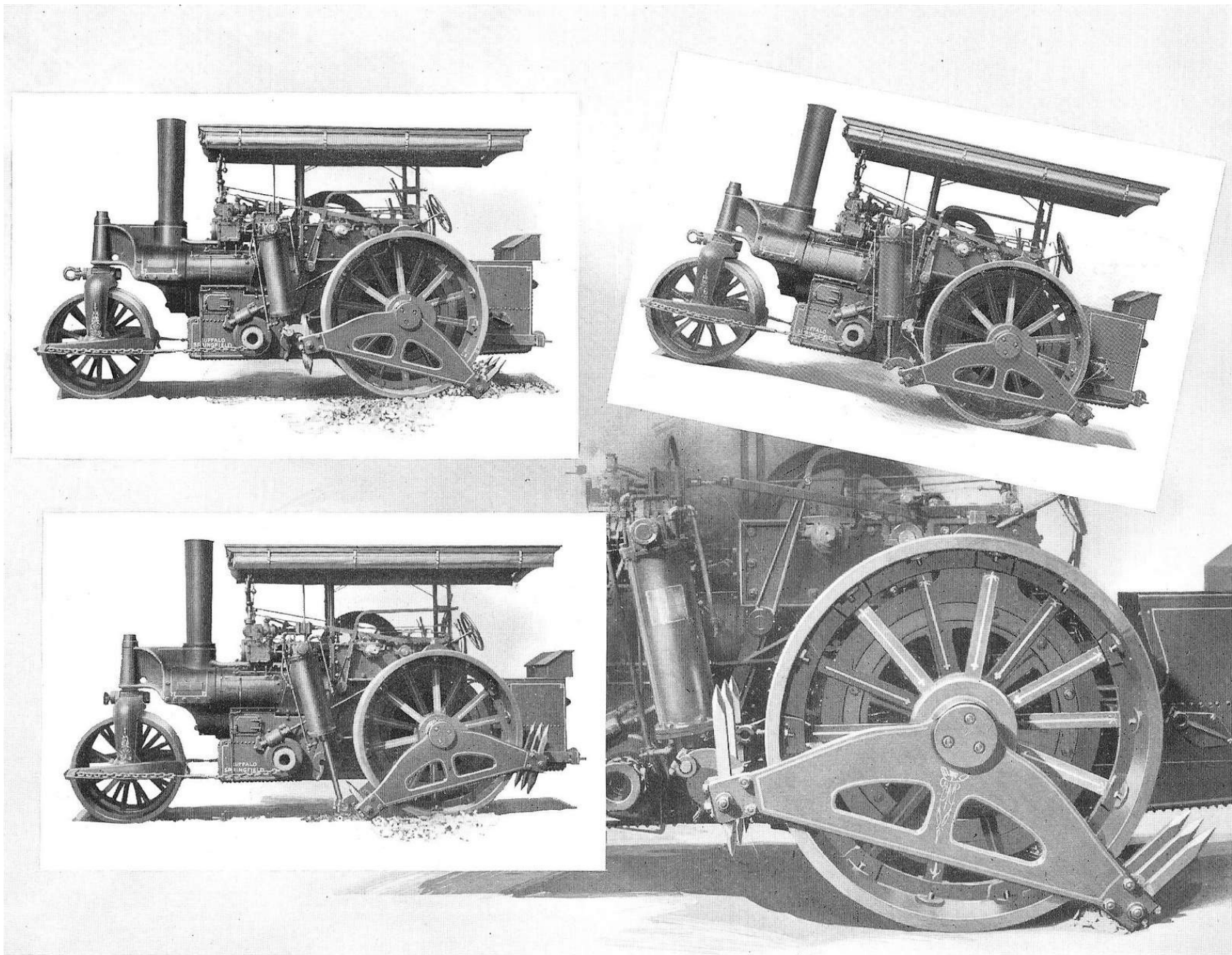
These rollers fill the demand for machines capable of breaking and loosening old hydraulic cement and bituminous concrete surfaces and bases.

Brittle materials can be first broken by using picks which can be inserted in the rims of the drive rolls and then loosened with the teeth of the scarifying device; non-brittle pavements, such as asphaltic concrete can be scarified by the teeth without the use of the wheel picks.

Buffalo-Springfield Maintenance Rollers are among the heaviest rollers built and the scarifying device is the strongest made. It consists of a steel frame pivoted on the main axle with its oscillation controlled by the operator through a four-way valve admitting steam either above or below the piston head, causing the front tooth-holding head to be either forcibly lifted or depressed. In scarifying with the roller in the forward motion, the front tooth-head is lifted, forcing the

FOR DIFFICULT  
SCARIFYING  
AND ROLLING  
WITH  
HIGH COMPRESSION





BUFFALO-SPRINGFIELD SPECIAL MAINTENANCE ROLLERS SHOWING THREE POSITIONS OF THE SCARIFYING MECHANISM

# THE BUFFALO-SPRINGFIELD ROLLER COMPANY

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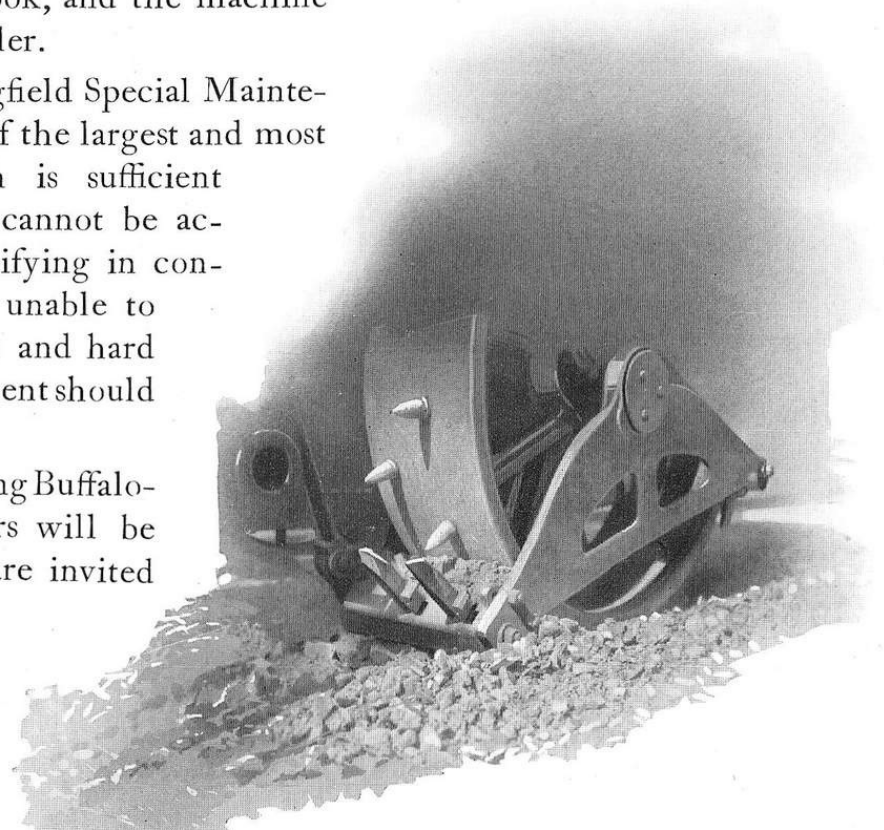
teeth of the rear head into the surface as the roller advances. At the end of the cut the front tooth-head is depressed, crowding the teeth of the forward head into the surface as the roller moves backward in the reverse. A large share of the weight of the roller can thus be brought to bear to compel penetration of the teeth. The width of the cut is up to two feet and loosening can be accomplished close to the curb or edge of the paved road.

When the scarifying device is not in use, the oscillating frame is held in a neutral position by a large hook, and the machine is then used as a standard three-wheel roller.

Many repeat purchases of Buffalo-Springfield Special Maintenance Rollers have been made by some of the largest and most experienced paving contractors, which is sufficient guarantee of their value for work that cannot be accomplished by any other system of scarifying in connection with a roller. Those who are unable to satisfactorily scarify exceptionally tough and hard materials with the usual scarifying equipment should investigate these machines.

A list of contractors and municipalities using Buffalo-Springfield Special Maintenance Rollers will be furnished to interested inquirers. You are invited to see the machines in operation under the most trying conditions.

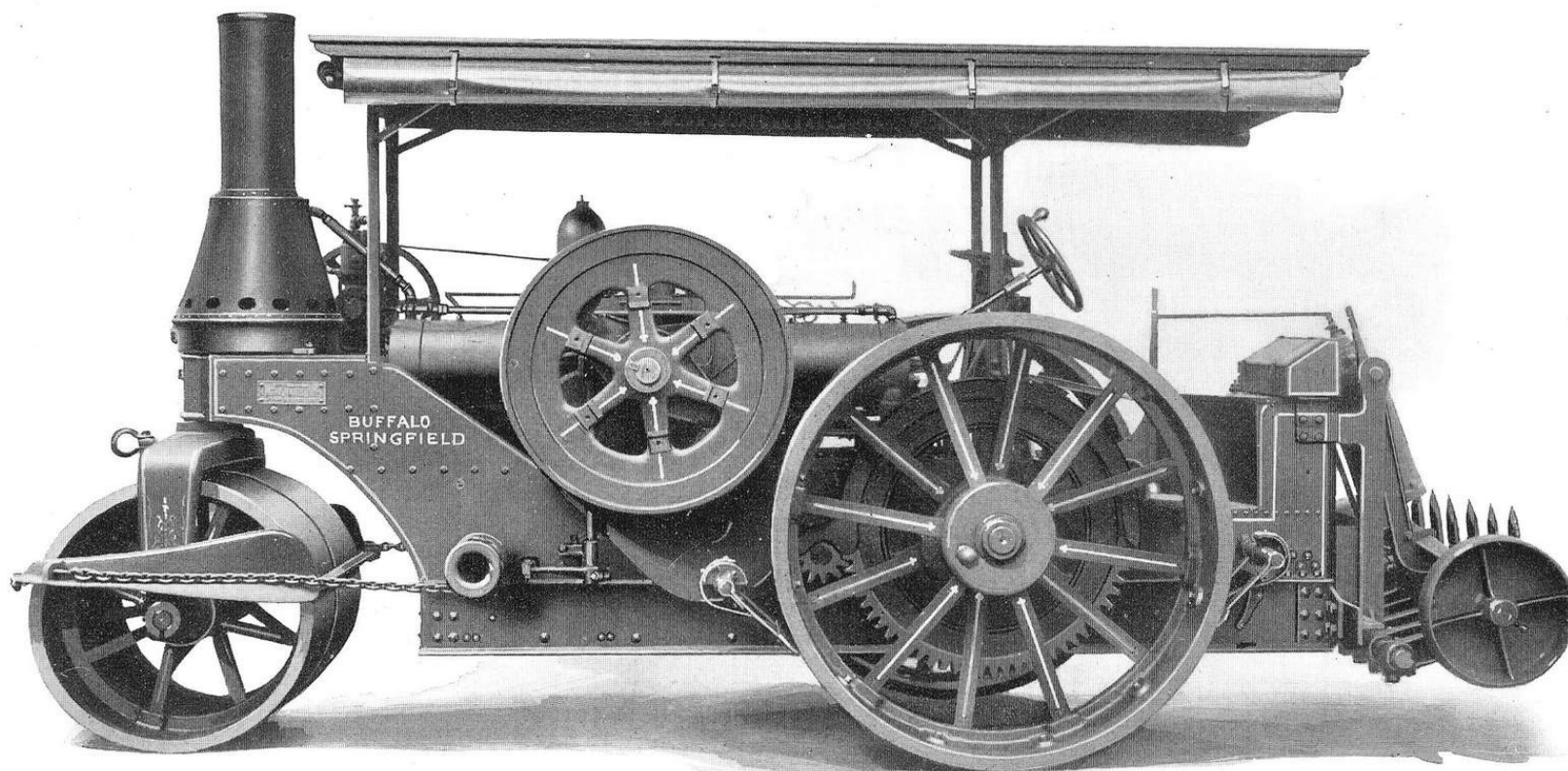
REPEAT PURCHASES  
BEAR WITNESS TO  
VALUE OF  
PERFORMANCE



BUFFALO-SPRINGFIELD STEAM AND MOTOR ROLLERS

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BUFFALO-SPRINGFIELD  
HEAVY DUTY  
TWO-CYLINDER MOTOR  
THREE-WHEEL ROLLER  
WITH  
PRESSURE SCARIFIER



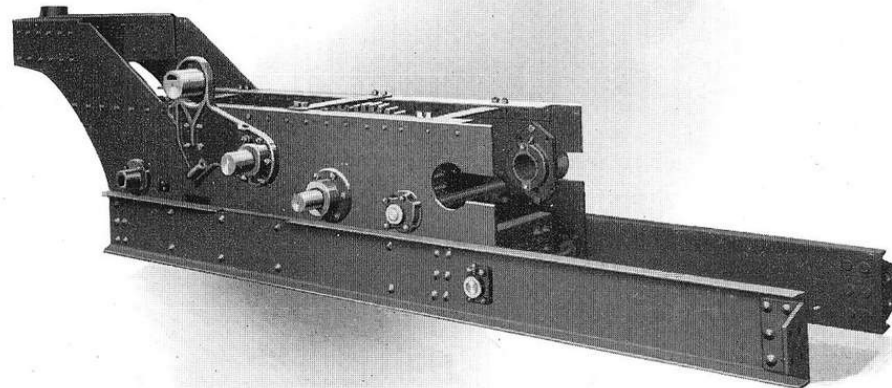
## BUFFALO-SPRINGFIELD TWO-CYLINDER MOTOR, THREE-WHEEL ROLLERS

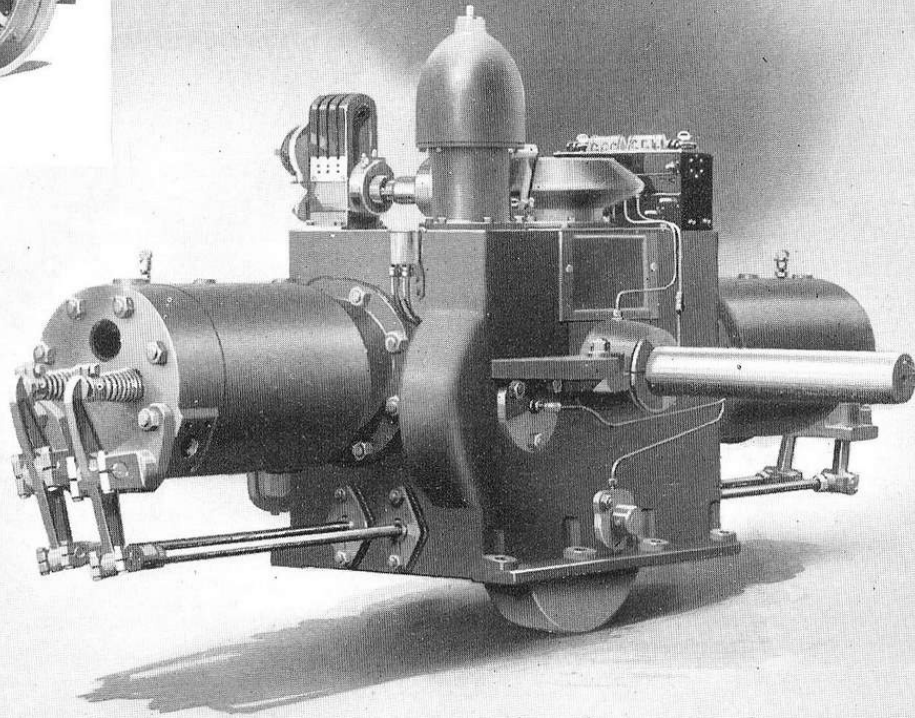
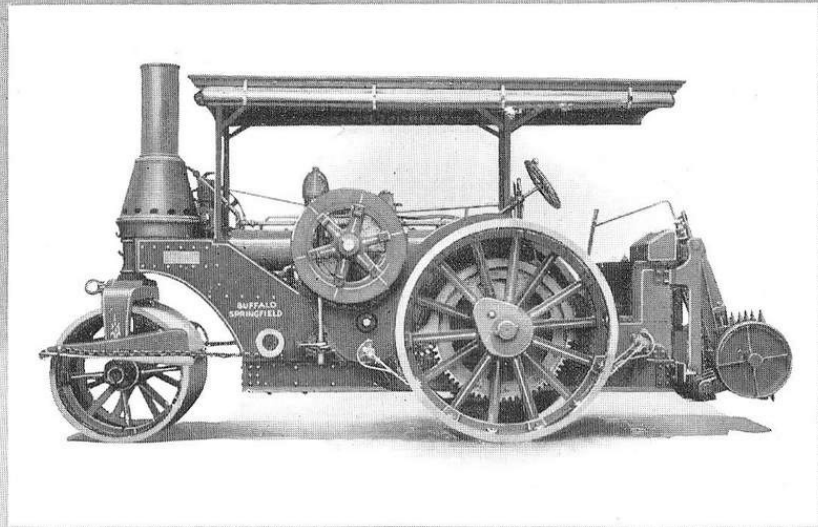
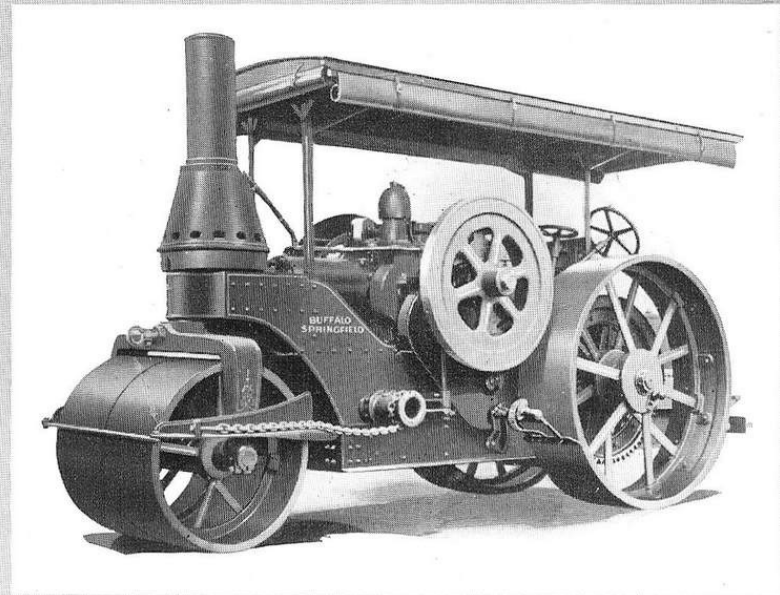
WHEN the use of internal combustion engines became sufficiently general to warrant the manufacture of rollers propelled by such power, this Company began an exhaustive experimentation and investigation to determine the type best adapted to the three-wheel class of machines. The results of this research led to the selection of the two-cylinder opposed type of heavy duty gasoline motor for the largest sizes of rollers, such as would be required to do much heavy work and that would have the durability expected of rollers manufactured by The Buffalo-Springfield Roller Company.

In the two-cylinder opposed type of motor, the reciprocating parts of each end are of equal weight and move at equal rates of speed in opposite directions, hence no longitudinal vibration results, such as is found in single-cylinder and twin-cylinder motor rollers. The two-cylinder balanced opposed type of motor also has the advantage of being easily started—a merit often lacking in a single-cylinder motor.

“The horizontal opposed type of engine has a perfect self-balancing

RESEARCH PROVED THE  
EFFICIENCY OF  
THE TWO-CYLINDER  
GASOLINE MOTOR  
ON THREE-WHEEL ROLLERS





MOTOR AND TWO SIZES OF BUFFALO-SPRINGFIELD TWO-CYLINDER, THREE-WHEEL MOTOR ROLLERS

# THE BUFFALO - SPRINGFIELD ROLLER COMPANY

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quality, which has eliminated vibration and provides that steady rolling so necessary for laying asphalt and other bituminous pavements.”

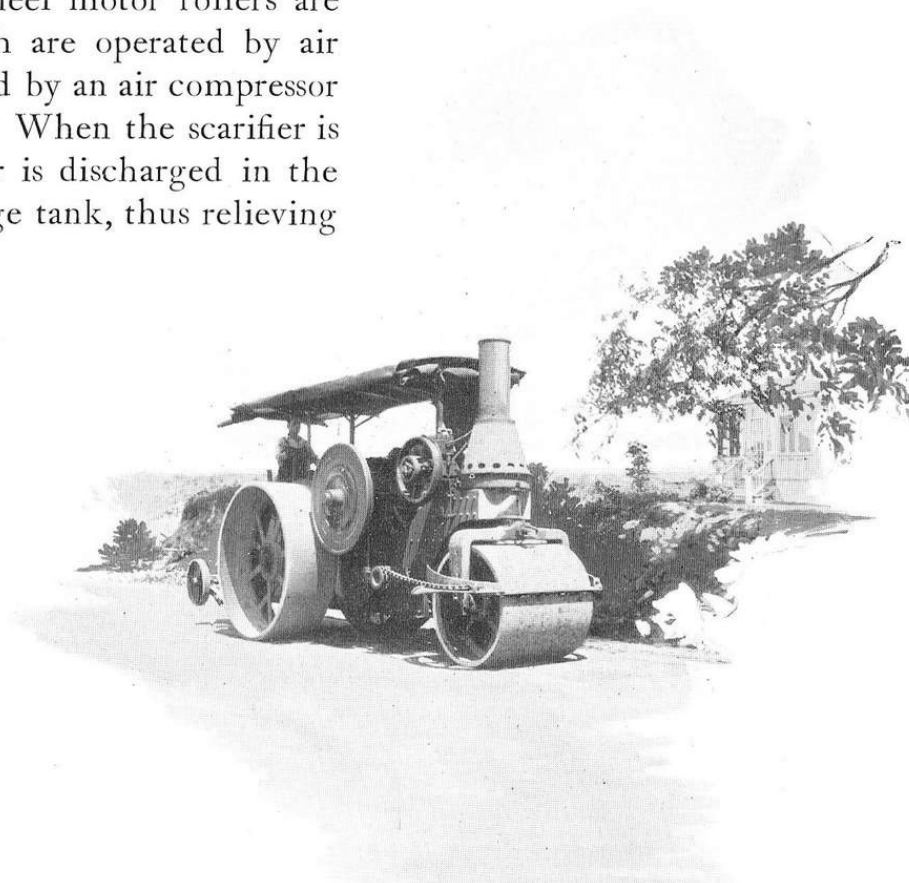
Many large users of rollers have standardized on Buffalo-Springfield two-cylinder motor rollers and are replacing other makes and types of rollers with them owing to the reliability of these machines reducing loss of service to a minimum.

Nearly all Buffalo-Springfield three-wheel motor rollers are equipped with pressure scarifiers which are operated by air pressure from an air tank that is supplied by an air compressor of ample capacity driven by the motor. When the scarifier is not in use the air from the compressor is discharged in the atmosphere instead of into the air storage tank, thus relieving the compressor from excessive wear and conserving the power of the motor. An automatic valve maintains the air in the tank at a constant pressure.

Buffalo-Springfield two-cylinder, three-wheel rollers are built in sizes ranging in weight from ten to sixteen tons.

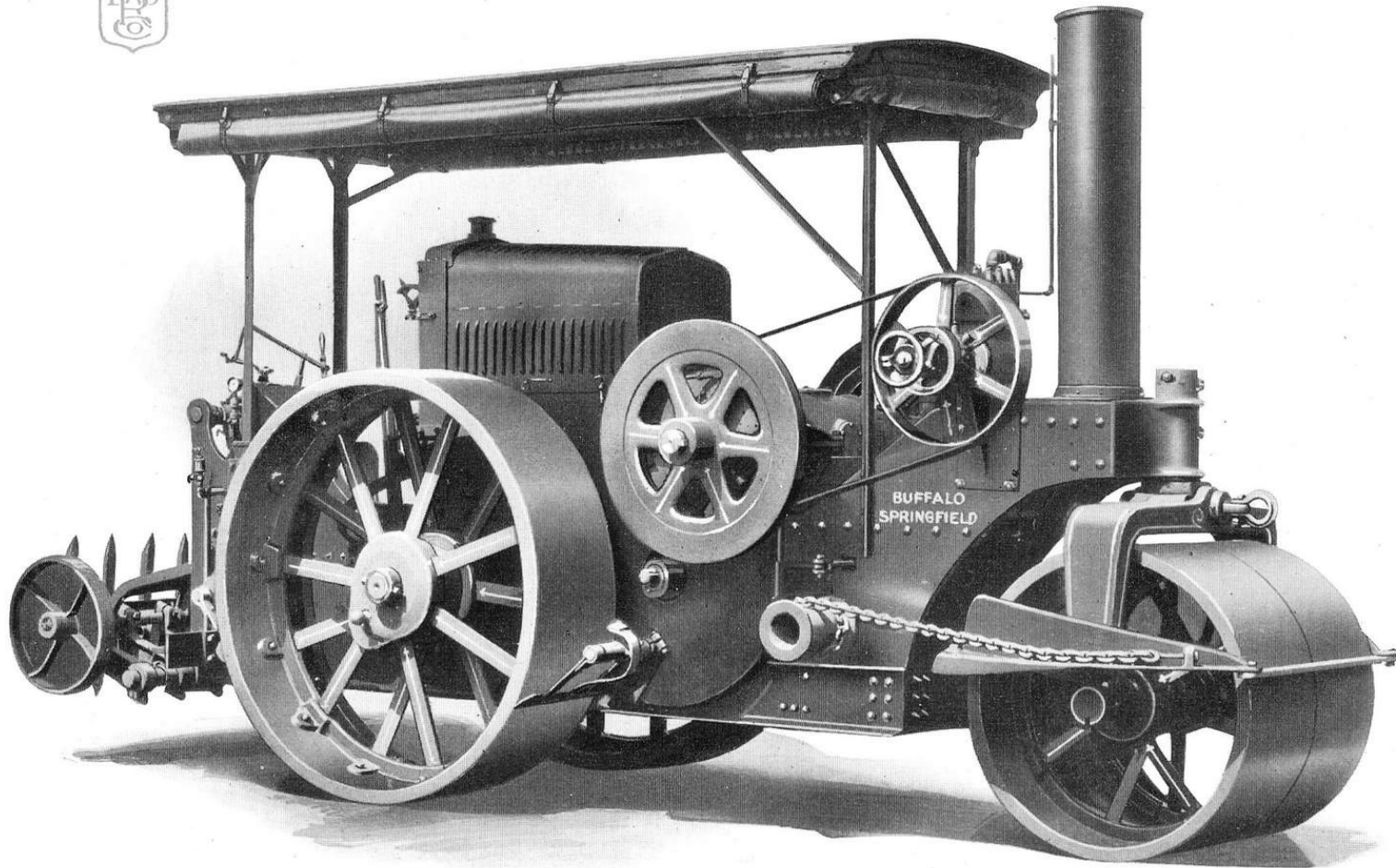
When so ordered, these machines are supplied with band wheel attachments for furnishing belt power, a convenience often of considerable importance in emergencies which may occur in highway construction.

EQUIPPED WITH  
PRESSURE  
SCARIFIERS



BUFFALO-SPRINGFIELD STEAM AND MOTOR ROLLERS

BUFFALO-SPRINGFIELD  
SPECIAL  
FOUR-CYLINDER  
THREE-WHEEL MOTOR  
ROLLER WITH  
PRESSURE SCARIFIER





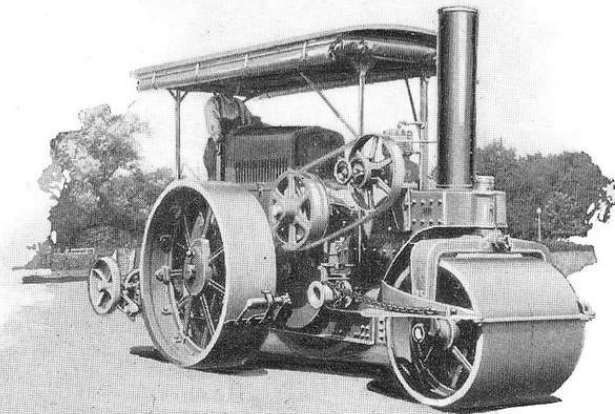
BUFFALO-SPRINGFIELD  
FOUR-CYLINDER MOTOR,  
THREE-WHEEL ROLLERS

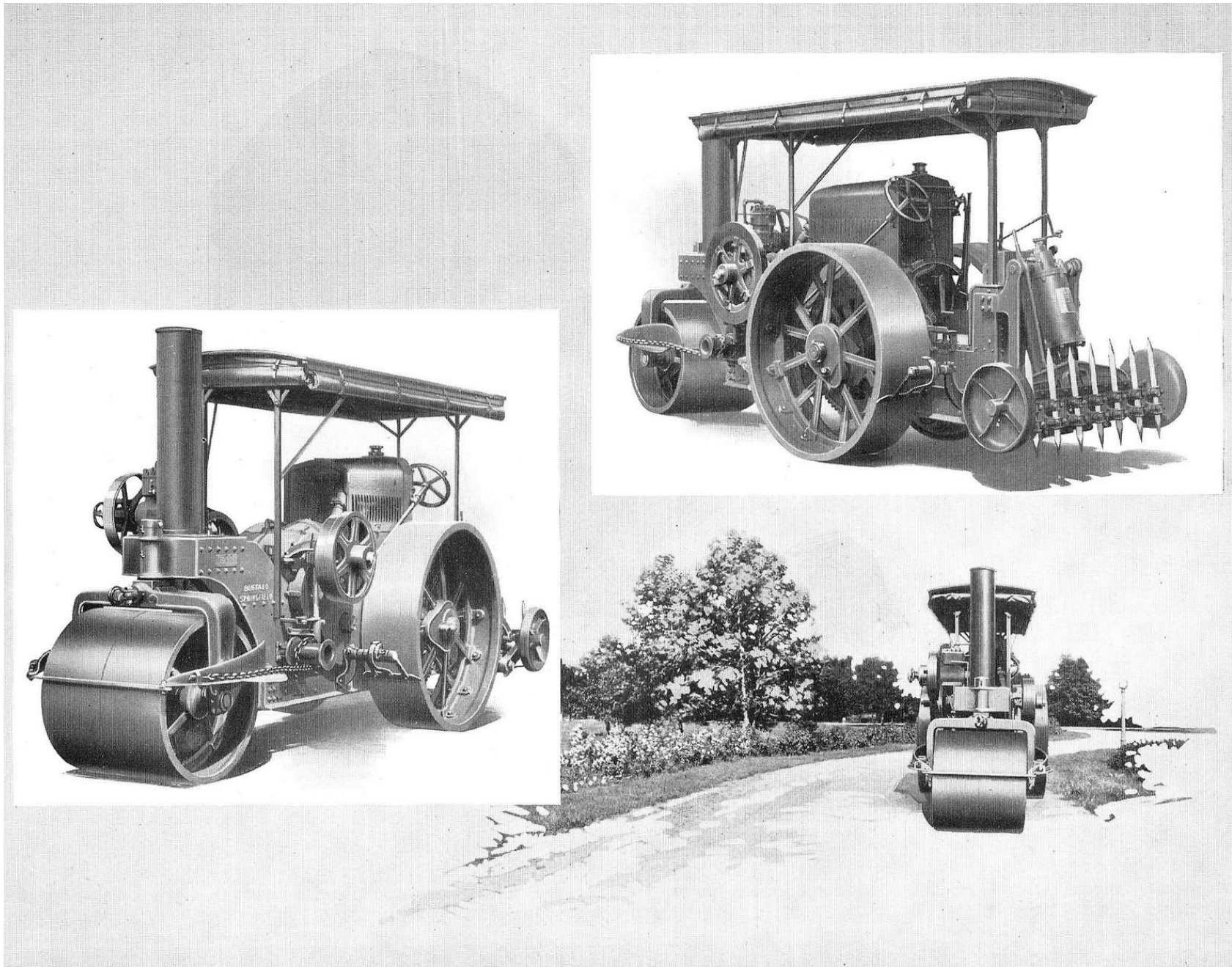
**T**HIS Company was the first manufacturer to produce road rollers propelled by four-cylinder internal combustion motors and during the past score of years has developed such machines to their present high standard of excellence.

Buffalo-Springfield four-cylinder motor, three-wheel rollers are made in sizes ranging in weight from four tons to fourteen tons. All are assembled on patented steel frames of unique design with heavy reinforcements for the side plates. The construction of this frame provides for the removal of the rear axle of the roller without disturbing the drive hubs, which are pressed on and keyed. Between the side plates of the frame are located the change speed gears, and all of these rollers are reversed wholly by means of friction clutches operated by a single lever, requiring no shifting of gears except when a change of gear speed is desirable. Speed gears are shifted by means of one lever conveniently located in front of the operator. Effective systems for cooling the circulating water of the motors are provided.

Buffalo-Springfield Special four-cylinder motor rollers are designed for high compression and heavy scarifying. They are provided with

FIRST TO BUILD  
FOUR-CYLINDER  
MOTOR ROLLERS





BUFFALO-SPRINGFIELD SPECIAL FOUR-CYLINDER MOTOR, THREE-WHEEL ROLLER

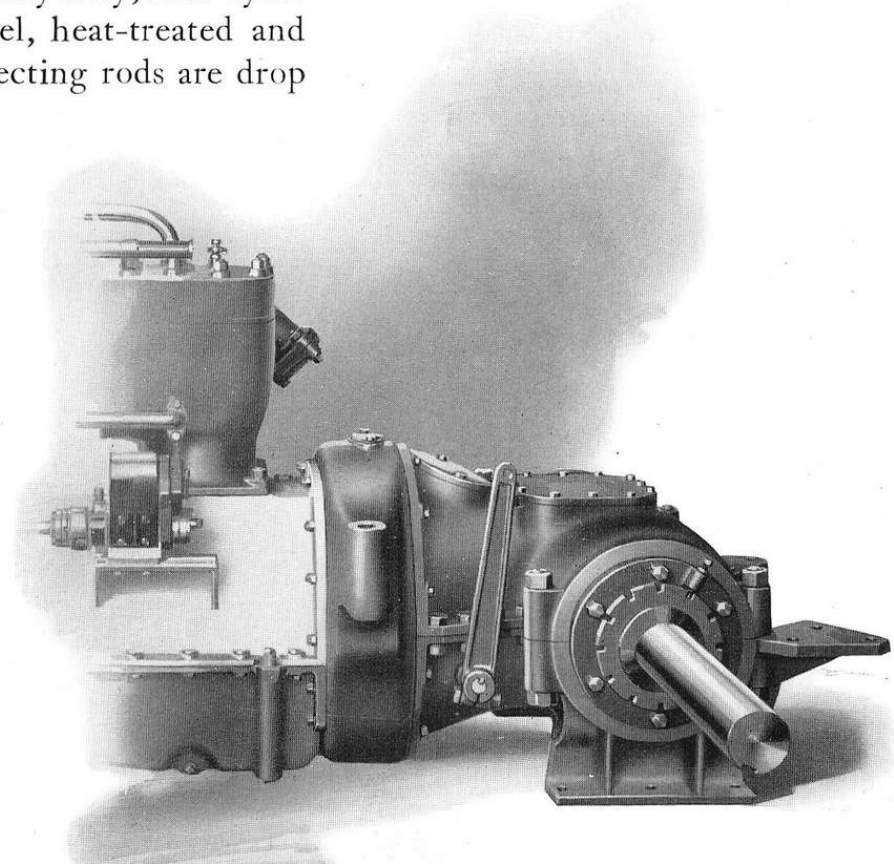
# THE BUFFALO-SPRINGFIELD ROLLER COMPANY

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heavy flywheels with service clutches located within the flywheels where they may be adjusted or relined easily. Between the motor and the clutch shaft is a disc clutch which, when released, enables the motor to run without turning the flywheels, which facilitates starting. The motor is so mounted that by loosening a few bolts the rear end can be raised so that the motor assumes an angle of 45 degrees, permitting access to the connecting rod and crank shaft bearings through the crank case of the motor. The motor is of the heavy duty, four-cycle type. The crank shaft is of chrome steel, heat-treated and carried in long main bearings. The connecting rods are drop forgings, and at the large end of each are four bolts of special heat-treated steel. The main and rod bearings are of bronze-back construction with special metal lining. The valves are of special alloy steel. The motor is fitted with a governor to regulate the speed. The lubrication is force feed through a geared pump to all main and connecting rod bearings. The water circulation is by a pump and is cooled by a radiator and fan.

Buffalo-Springfield standard four-cylinder motor, three-wheel rollers are of a design which is simple and

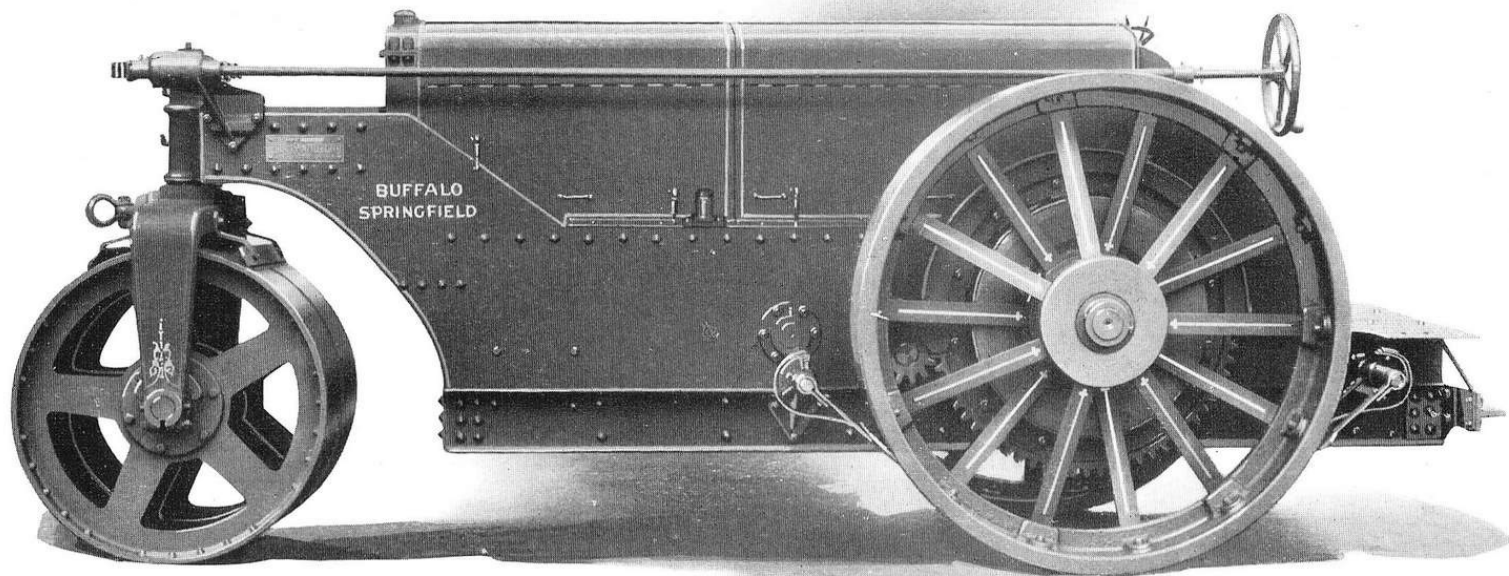
MOTOR AND CLUTCHES  
EASILY ACCESSIBLE  
FOR ADJUSTMENT



BUFFALO-SPRINGFIELD STEAM AND MOTOR ROLLERS

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BUFFALO-SPRINGFIELD  
STANDARD  
FOUR-CYLINDER MOTOR  
THREE-WHEEL ROLLER

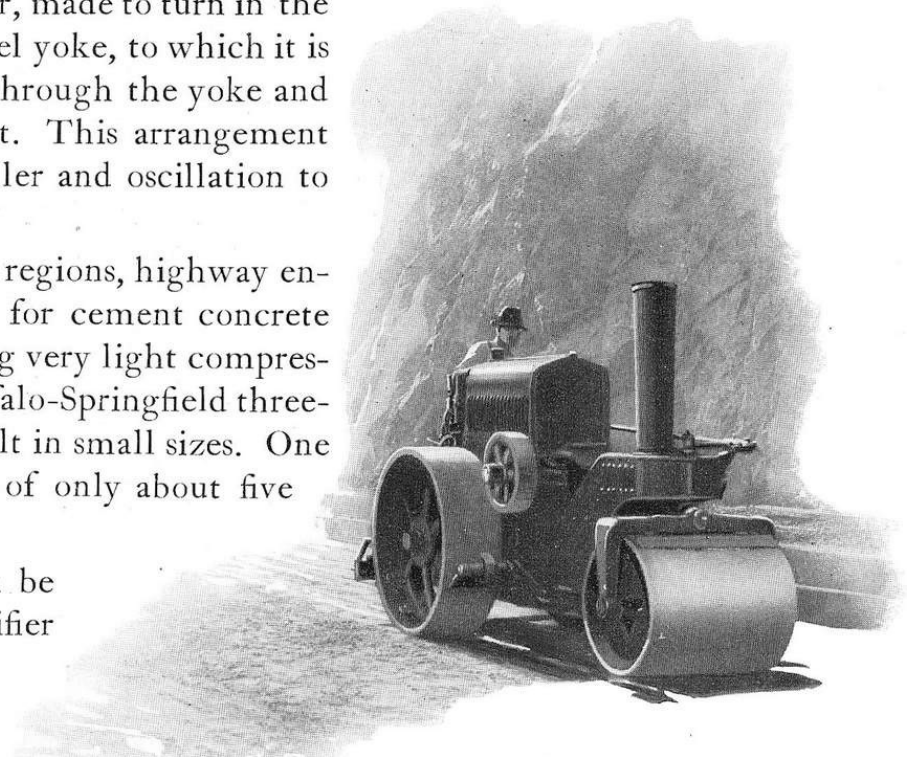


compact. The motor is located between the side plates of the frame and the service clutches are also so designed that they need not be removed for relining or adjustment. Steering is by means of a worm and segment keyed directly to the king post. The gears are of large size and are of the highest quality of steel. The radiator for cooling the circulating water of the motor forms the front head of the hood which encloses the power and transmission mechanism and also the air compressor and air tank if the roller is equipped with a pressure scarifier. A fuel tank, of ample capacity, is located under the operator's platform. The king post of all Buffalo-Springfield three-wheel rollers is a steel forging of large diameter, made to turn in the front housing and machined to fit the steel yoke, to which it is held by a forged steel pin which passes through the yoke and through the lower end of the king post. This arrangement gives free movement for steering the roller and oscillation to conform to the road surface.

Due to peculiar soil conditions in certain regions, highway engineers have specified that the subgrade for cement concrete pavements be rolled with a roller exerting very light compression. To meet such conditions, some Buffalo-Springfield three-wheel, four-cylinder motor rollers are built in small sizes. One of the most popular has a rolling width of only about five feet and a wheel base of seven feet.

These small three-wheel machines can be equipped with a pressure cylinder scarifier

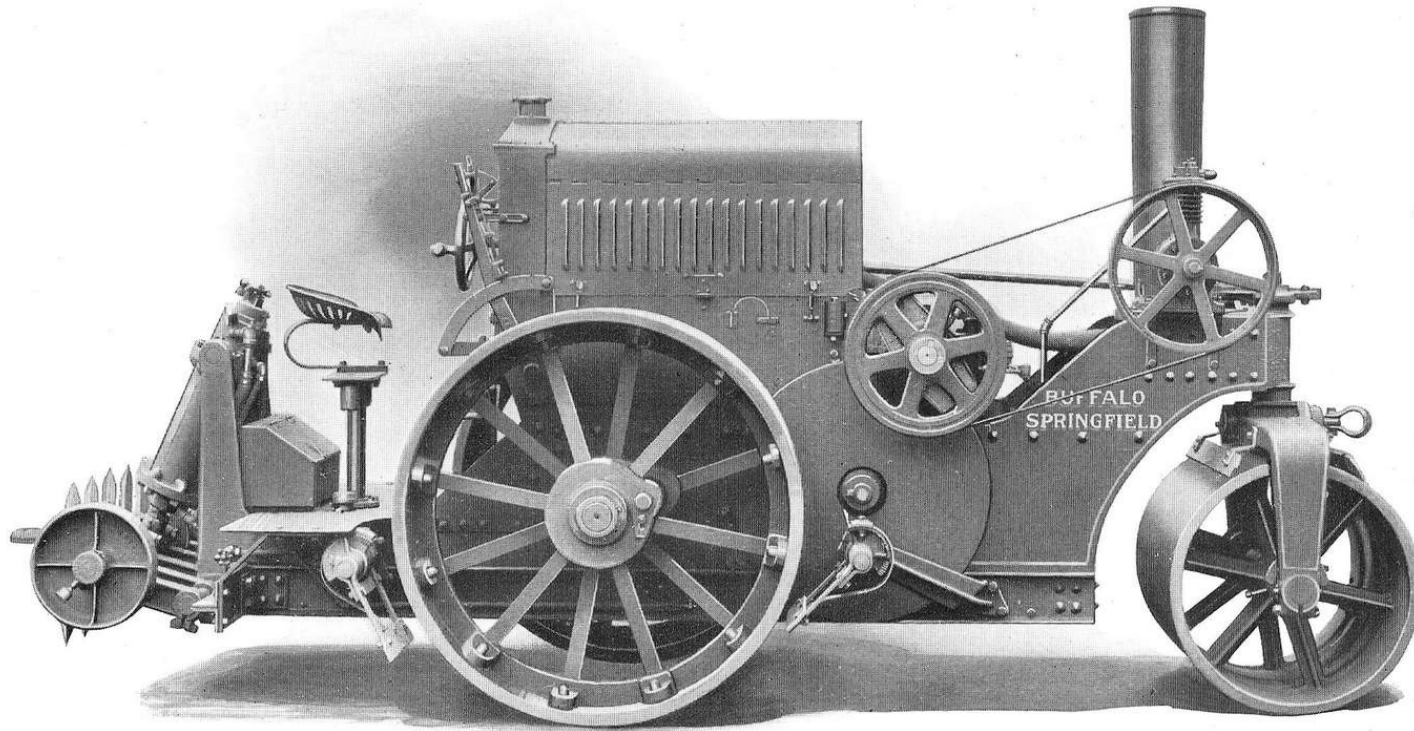
CHANGE SPEED  
GEARS OF LARGE  
SIZE



BUFFALO-SPRINGFIELD STEAM AND MOTOR ROLLERS

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SMALL SIZE OF  
BUFFALO-SPRINGFIELD  
FOUR-CYLINDER  
THREE-WHEEL MOTOR  
ROLLER WITH PRESSURE  
SCARIFIER



## THE BUFFALO-SPRINGFIELD ROLLER COMPANY

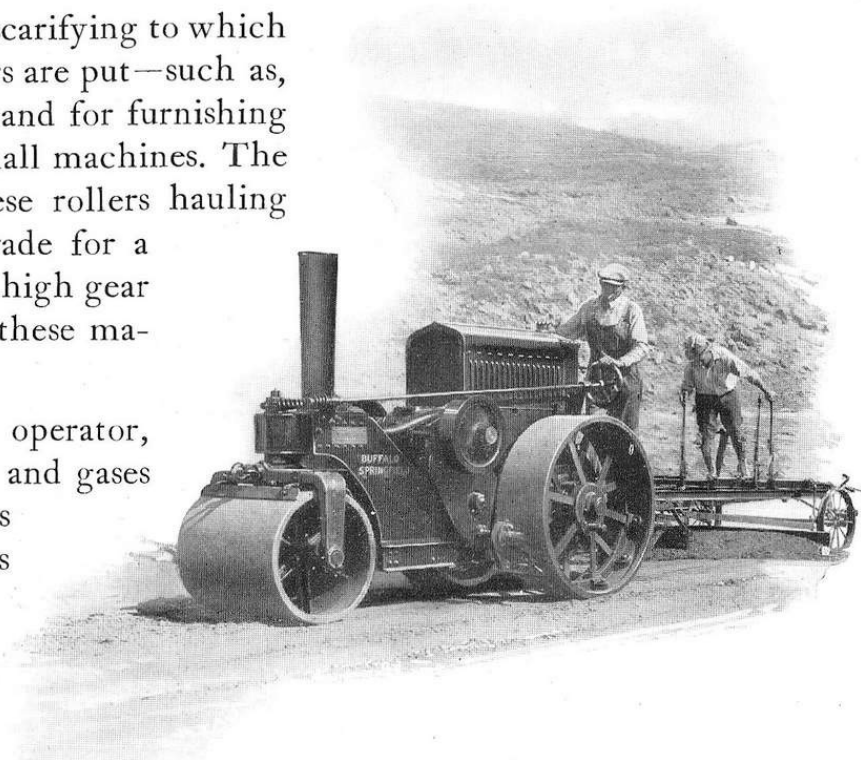
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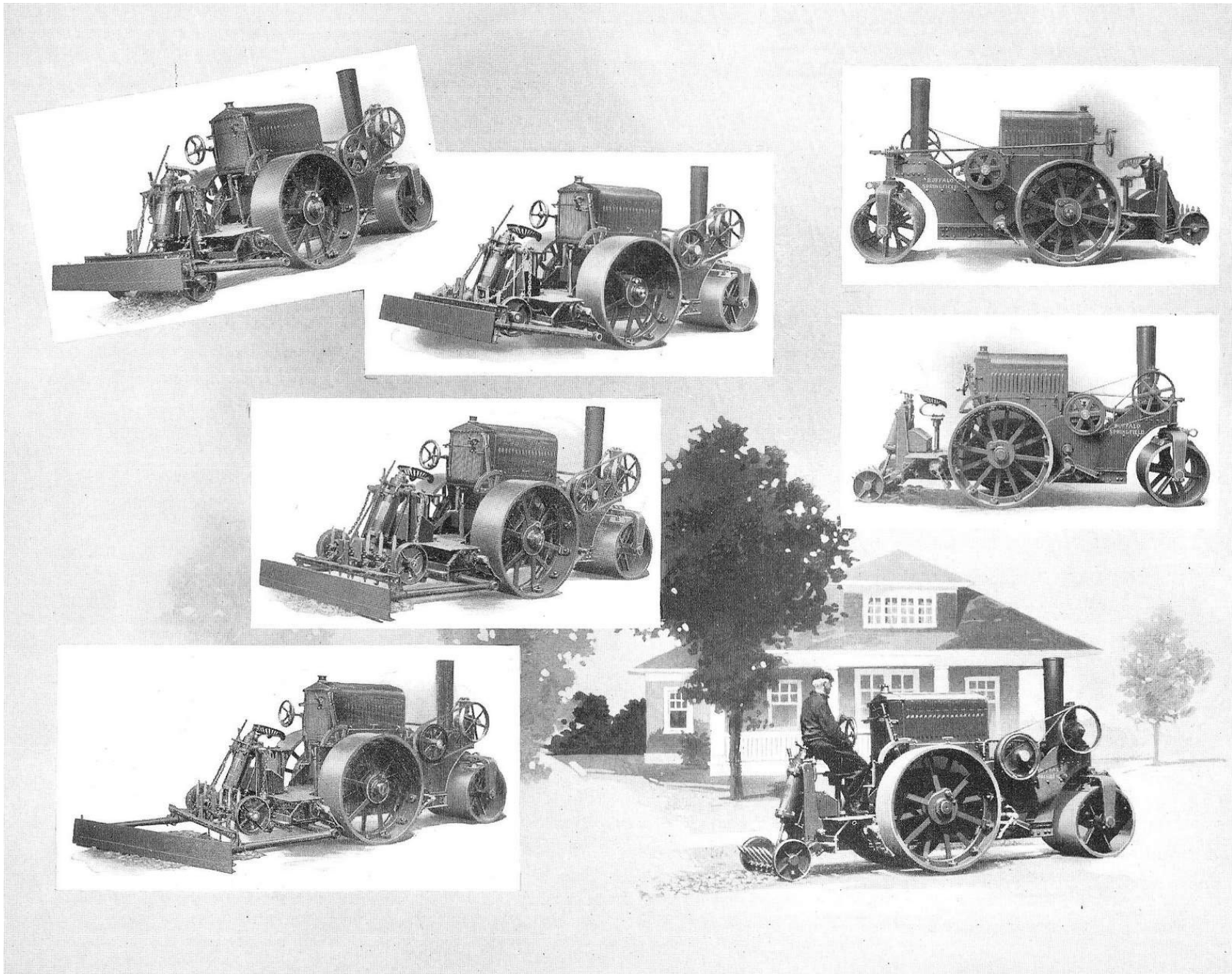
having the same general design as those employed on the large three-wheel rollers. These small rollers are built along the same lines as the large machines, including change speed gearing for both the forward and backward motions, large service clutches and tension spoke wheels. The motor is capable of developing all the power that a light roller can use. These small machines, up to the limits imposed upon them by their weight, are capable of performing all classes of rolling and scarifying, and they can be equipped with a leveling blade for smoothing or windrowing loose material. The blade is raised and lowered by the pressure cylinder of the scarifier.

There are many uses other than rolling and scarifying to which small Buffalo-Springfield three-wheel rollers are put—such as, hauling graders, subgraders, and materials; and for furnishing belt power for air compressors and other small machines. The illustration on this page shows one of these rollers hauling a grader in the preparation of the subgrade for a California highway. The powerful motor, high gear ratio and small drive roll diameter enable these machines to operate on very steep grades.

For the convenience and comfort of the operator, these rollers are so designed that the hot air and gases from the motor are blown by the fan towards the front end of the machine. The seat swivels and is adjustable as to lateral position, facilitating operation when the roller is in reverse.

NOT A CONVERTED  
FARM TRACTOR





SMALL BUFFALO-SPRINGFIELD FOUR-CYLINDER MOTOR, THREE-WHEEL ROLLERS WITH SCARIFIERS AND LEVELING BLADES



# THE BUFFALO - SPRINGFIELD ROLLER COMPANY

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Reversing is wholly through friction clutches operated by a single lever. No shifting of gears is required to reverse direction of travel.

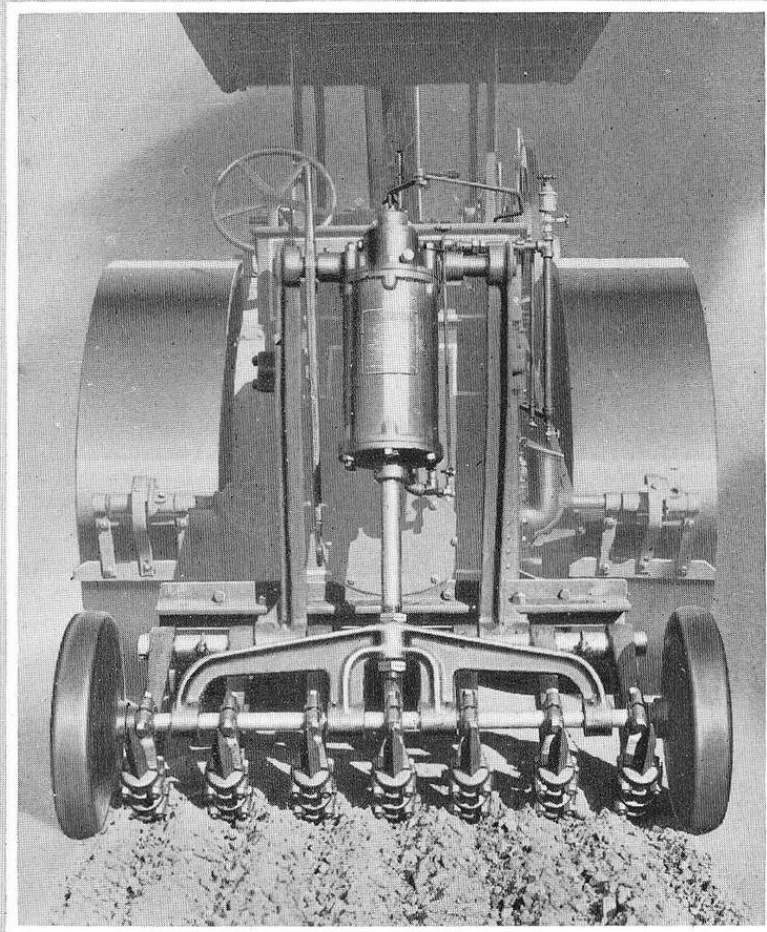
HAULED HEAVY  
SUBGRADING MACHINE  
UP HILL

The purchaser of the first five-ton Buffalo-Springfield three-wheel motor roller wrote:

“This machine has been giving very satisfactory use all summer on a twelve-mile stretch of work between Elizabeth and Galena, Illinois. This stretch of road is very hilly, many of the grades being long and running as high as seven per cent. The roller gave very satisfactory service even on the steep grades. Due to the fact that a great deal of the subgrade was loose and solid rock, we did not use a subgrade machine on all the work. Whenever it was practicable to use our large, full width steel subgrader, we found that the five-ton roller had ample power to pull it. This was true even though it was pulled up some very steep grades.”

On the opposite page are shown the leveling blades of Buffalo-Springfield three-wheel steam rollers in various positions.

In the first, the leveling blade is suspended and the scarifier engaged. In the second, both the scarifier and the leveling blade are suspended. In the third, the scarifier is suspended and the leveling blade is in smoothing position. In the fourth, the scarifier is suspended, with the leveling blade in operation and in windrowing position. As the scarifying is done in the forward motion and the leveling in the reverse, the roller is not compelled to run idle or to recompact the loosened material.



BUFFALO-SPRINGFIELD PRESSURE CYLINDER SCARIFIERS

## BUFFALO-SPRINGFIELD SCARIFIERS

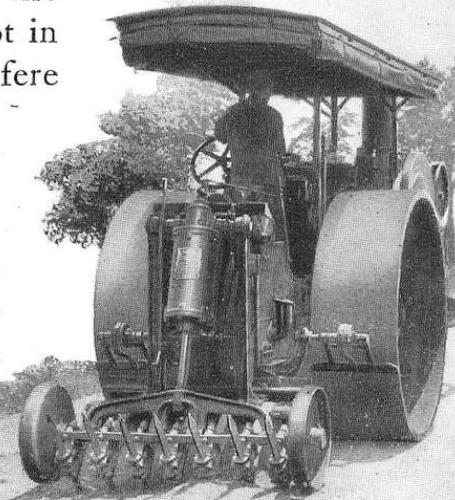
**M**ODERN highway construction and maintenance usually involve the loosening of old materials in the preparation of subgrade or for making repairs.

By far the most convenient and economical method of loosening such materials or surfaces is by means of a Buffalo-Springfield Pressure Scarifier attached to the rear of the three-wheel roller. Such scarifiers are ordered attached to over three-fourths of all Buffalo-Springfield three-wheel rollers now purchased, and new Buffalo-Springfield scarifiers can easily be installed in the field on rollers already in service.

The depth of scarifying is regulated within limits by the adjustment of the teeth in the holders and also at the will of the operator by the control of the pressure cylinder. When not in use, the scarifier is suspended by a hook and does not interfere with the usefulness of the roller for rolling or hauling. The pressure scarifier is always with the roller when needed.

Owners of rollers without scarifiers can have their machines so equipped in the field at moderate expense. For steam rollers, the steam from the boiler is used in the scarifier cylinder. For motor rollers, compressed air is used, which is supplied by an air compressor discharging through an air tank, where the pressure is kept uniform by an automatic valve.

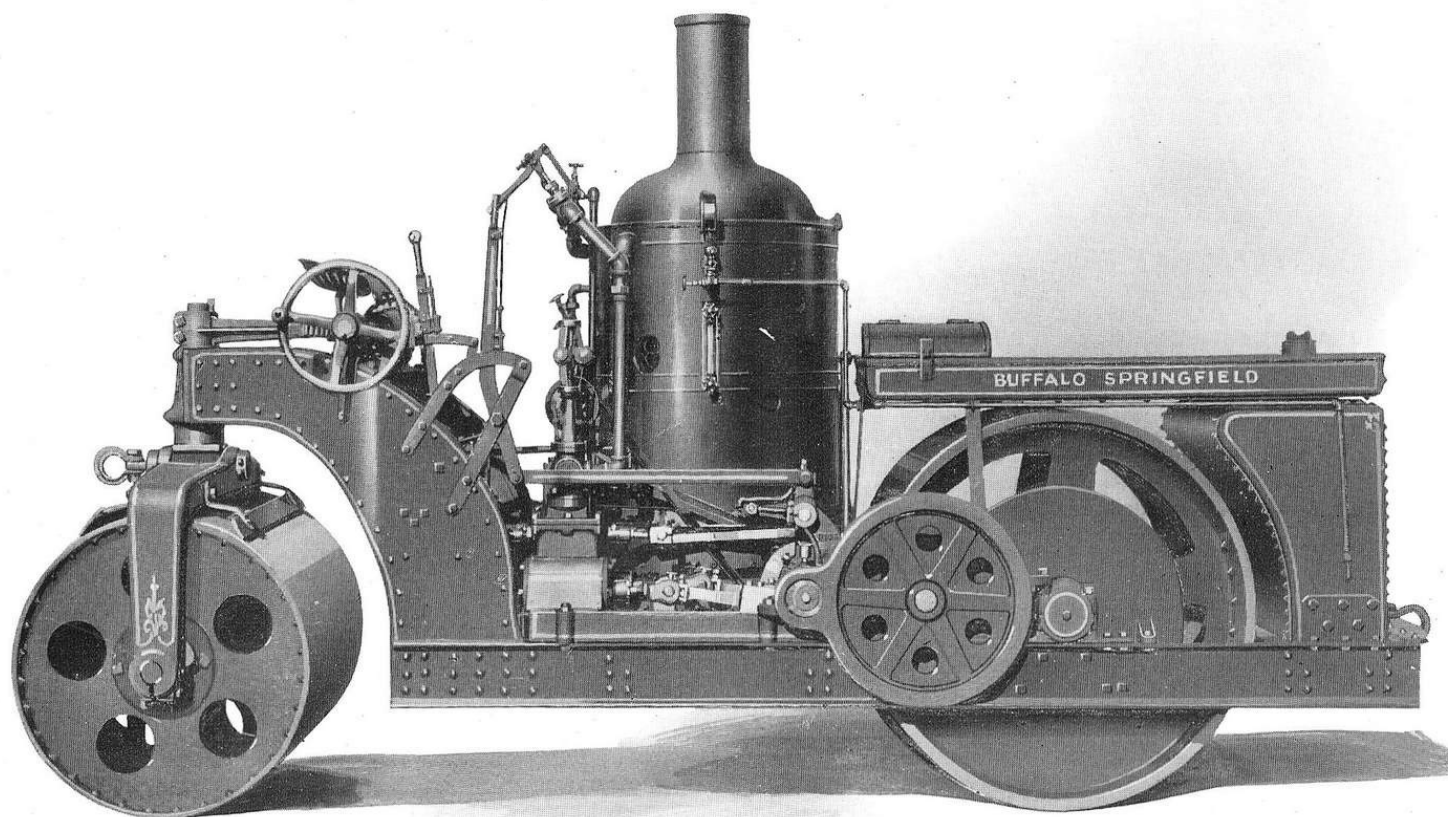
MAY BE ATTACHED  
TO ROLLERS ALREADY  
IN SERVICE



BUFFALO-SPRINGFIELD STEAM AND MOTOR ROLLERS

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BUFFALO-SPRINGFIELD  
TANDEM  
STEAM ROLLER



## BUFFALO-SPRINGFIELD TANDEM STEAM ROLLERS

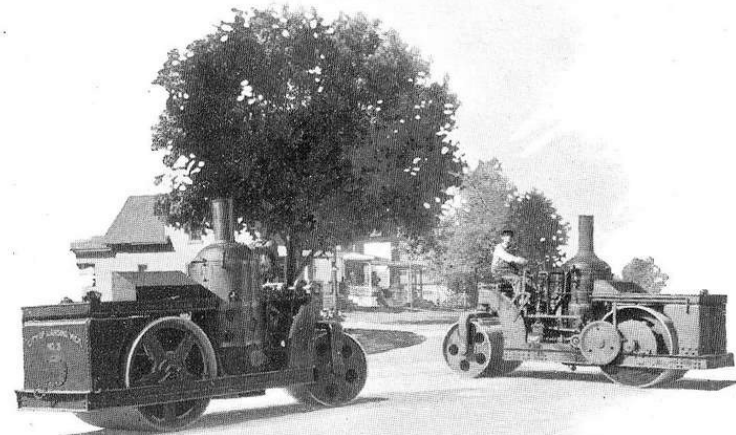
**T**HE first rollers built in America were of the tandem type and were designed by Andrew Lindelof of New York in 1873. The engine was mounted vertically and the transmission consisted only of a bevel gear and pinion.

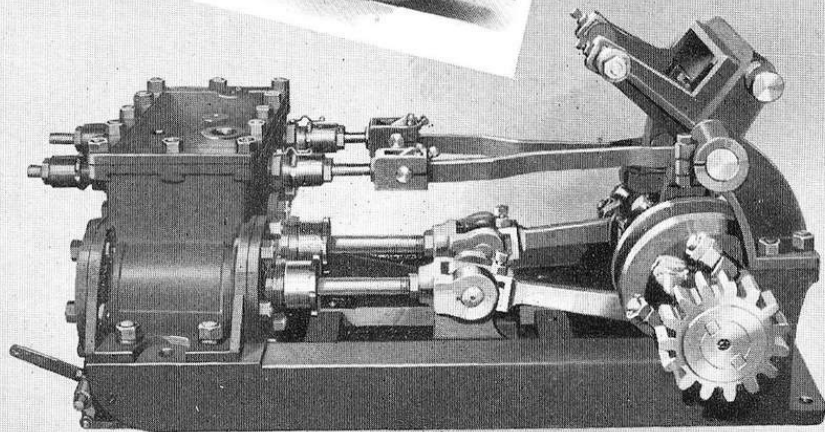
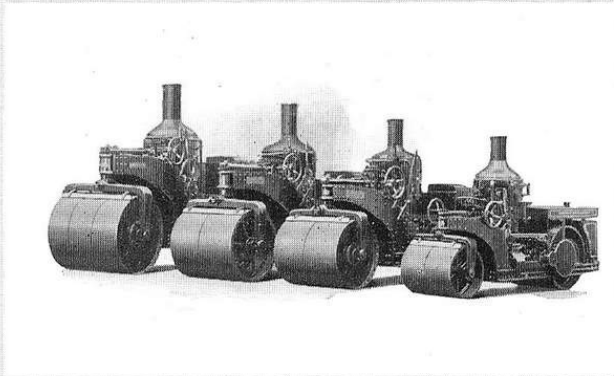
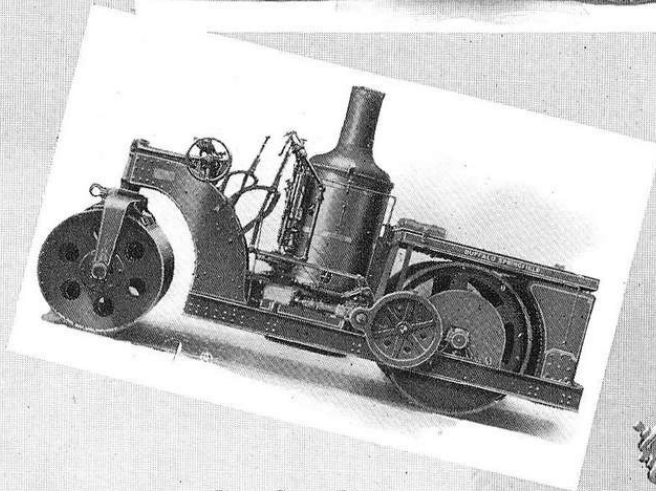
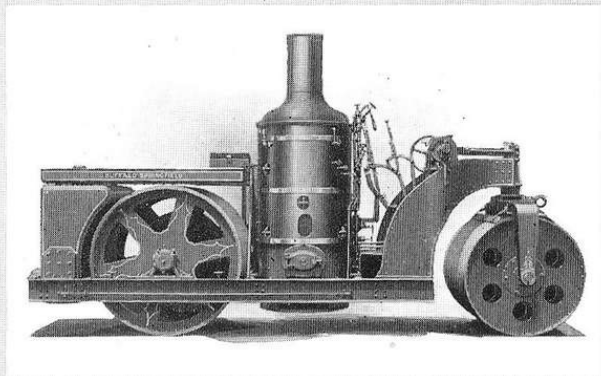
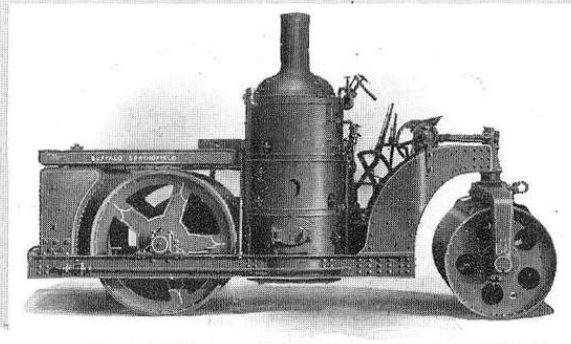
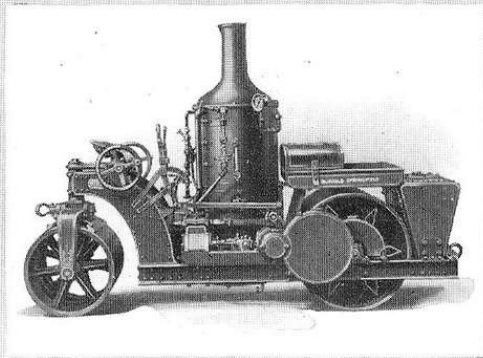
ORIGINAL IN  
DESIGN

Rollers of similar design were later made by this Company and several other manufacturers. A machine of the Lindelof design built by this Company will be found illustrated on page 44.

Over twenty years ago this Company recognized the objectionable features of the vertical engine with longitudinal crank shaft and the two-gear beveled transmission of low ratio, as they made a top-heavy machine with a rocking vibration injurious to the asphaltic surfaces on which they were usually employed.

A new Buffalo-Springfield design was created providing for a double engine horizontally mounted on the main frame, transmitting power to the drive roll through all spur gearing. This arrangement gave a low center of gravity and a transverse crank shaft that freed the roller from vibration and fitted it for all classes of work for which tandem rollers are preferable. The Buffalo-Springfield steam tandem design has been imitated in America and abroad.





ENGINE AND FOUR SIZES OF BUFFALO-SPRINGFIELD TANDEM STEAM ROLLERS

# THE BUFFALO - SPRINGFIELD ROLLER COMPANY

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Buffalo-Springfield tandem steam rollers are used for rolling block and plastic pavements and for gravel and macadam drives and walks. They are built in sizes ranging in weights from two to thirteen tons. They are most extensively employed for rolling asphaltic and bituminous concrete and for sheet asphalt.

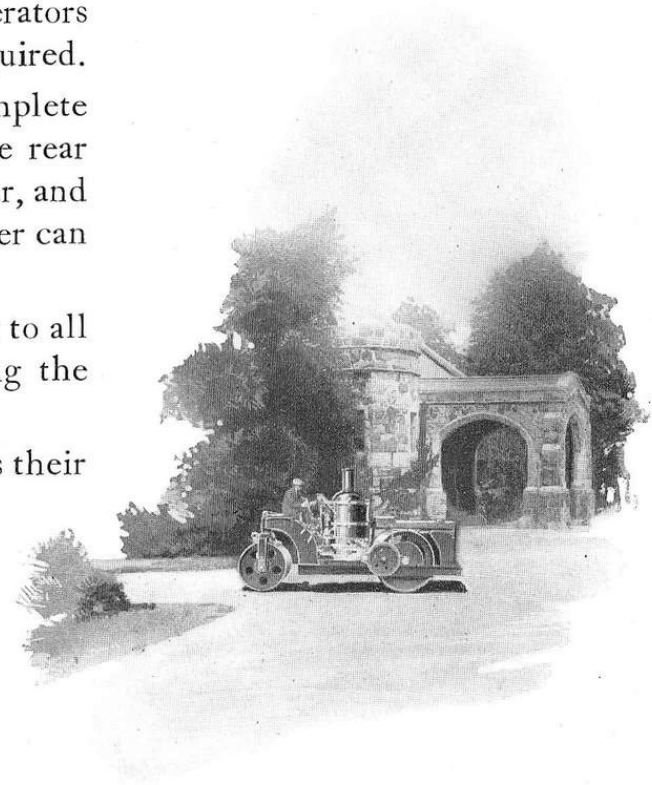
All Buffalo-Springfield tandem steam rollers weighing five tons or more are equipped with separate steam steering engines, facilitating rapid handling on hot material. All sizes weighing more than six tons are also equipped with governor control for the main engine. Such a control is preferred by many operators and it enables the engine to be used for belt power if required.

The frames of Buffalo-Springfield tandem rollers are complete in themselves and do not employ the water tank for the rear member. To the rear channel is attached a strong drawbar, and a clevis is attached to the front yoke pin so that the roller can be used for hauling in either direction.

The engine is of the open-top type, which permits access to all bearings for lubrication and adjustment, notwithstanding the proximity of the boiler.

Buffalo-Springfield tandem rollers have been adopted as their standard equipment by the majority of paving contractors in the United States, and they occupy a like position of leadership in the paving equipment of the most progressive municipalities.

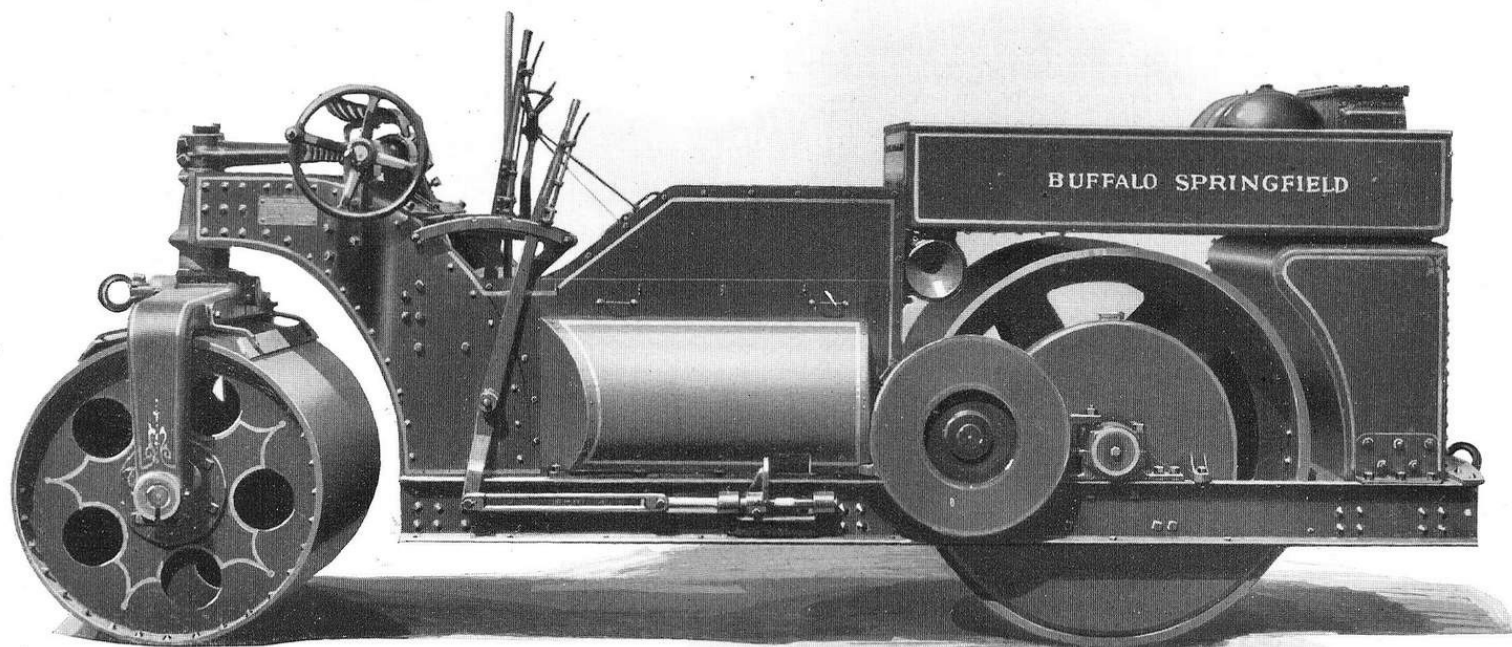
SEPARATE  
STEERING ENGINES  
PROVIDED



BUFFALO-SPRINGFIELD STEAM AND MOTOR ROLLERS

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BUFFALO-SPRINGFIELD  
TWO-CYLINDER  
MOTOR TANDEM  
ROLLER





## BUFFALO-SPRINGFIELD TANDEM MOTOR ROLLERS

As soon as the Buffalo-Springfield type of steam tandem roller was produced and its superiority over the old beveled main drive type was demonstrated, this Company turned its attention to the production of tandem motor rollers, embodying many of the superior features of the improved steam machines. Among these were spur main gearing, straight frame side members, cast steel yoke, power steering gear, high frame clearance, and a low center of gravity.

The Company's experience and experimentation indicated that the most desirable types of motors for tandems were the two-cylinder opposed and the four-cylinder vertical, and they were therefore adopted.

The fact that this Company was the manufacturer of the first tandem motor rollers ever produced and that the design was a success from the first has enabled the bringing of Buffalo-Springfield tandem motor rollers to their present high state of development.

The unique and important feature of the Buffalo-Springfield two-cylinder tandem motor roller is the large steel casting which combines in one piece the transmission shafting brackets and the bed to which the motor

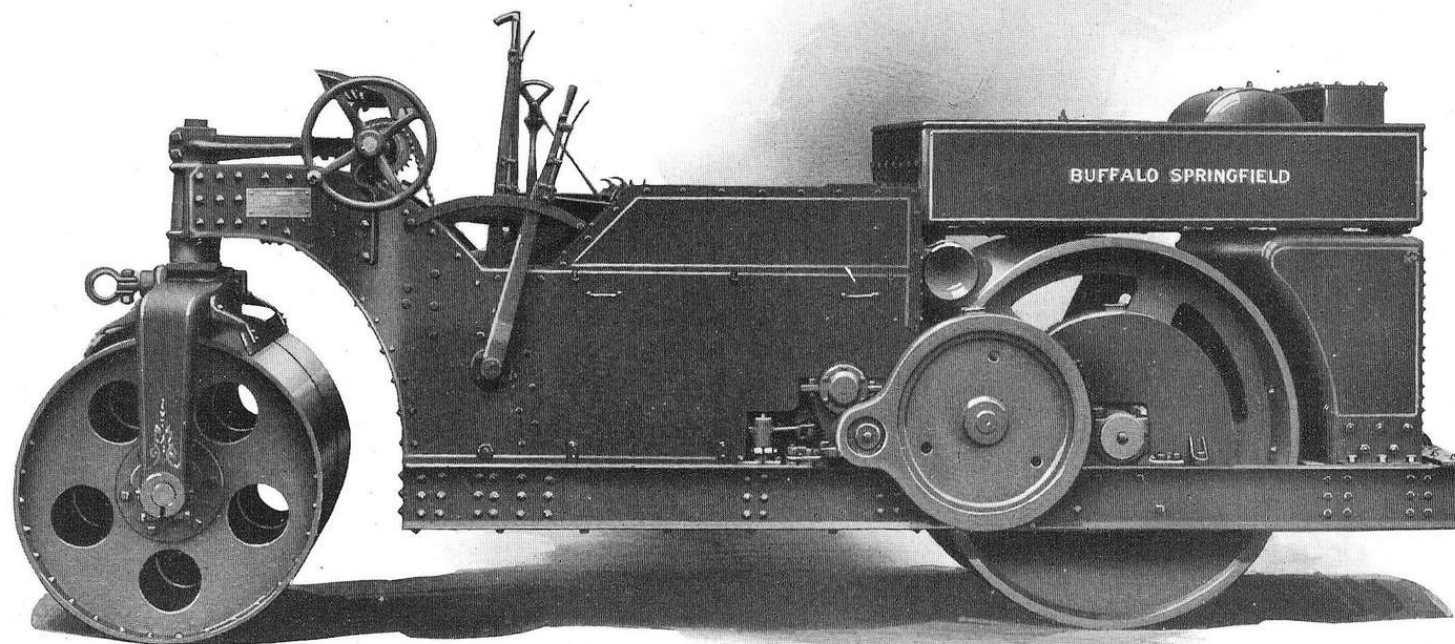
FIRST TO BUILD  
MOTOR TANDEM  
ROLLERS



BUFFALO-SPRINGFIELD STEAM AND MOTOR ROLLERS

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BUFFALO-SPRINGFIELD  
FOUR-CYLINDER  
MOTOR TANDEM  
ROLLER



# THE BUFFALO - SPRINGFIELD ROLLER COMPANY

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base is fastened. This arrangement not only further adds to the rigidity of the frame but preserves the relative position and alignment of the motor, transmission gears, shafting and bearings.

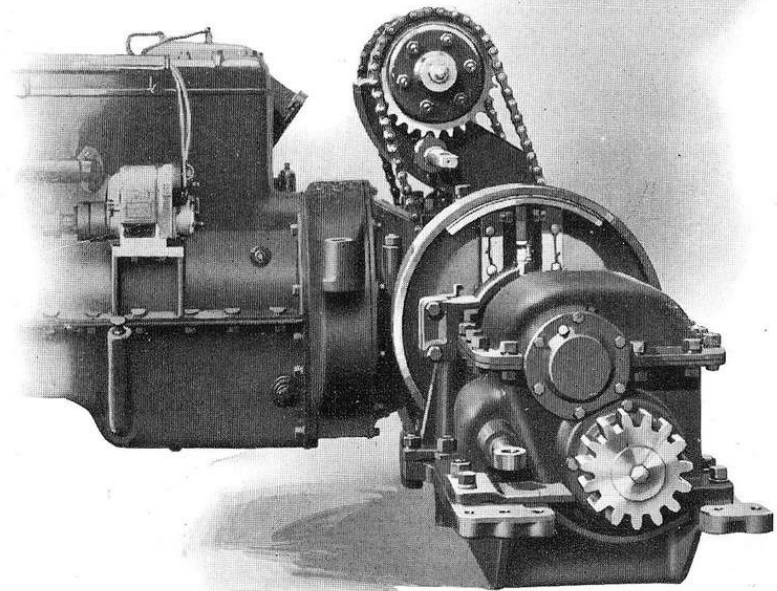
As gasoline motors possess less speed flexibility than do steam engines, a change of gear speed is provided to give the range necessary for all classes of work. In both the two-cylinder and the four-cylinder motors the power of the motor is delivered to the transmission through two large expansion clutches—one being used for the forward motion and the other for the reverse.

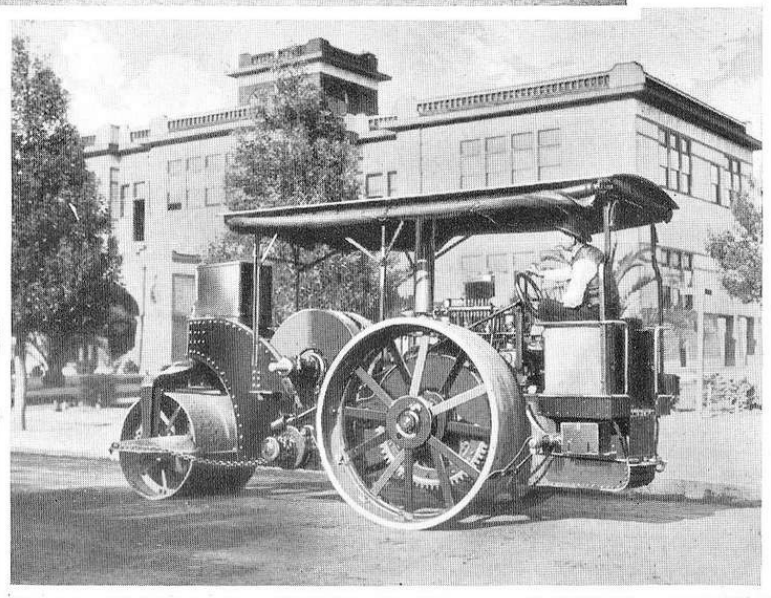
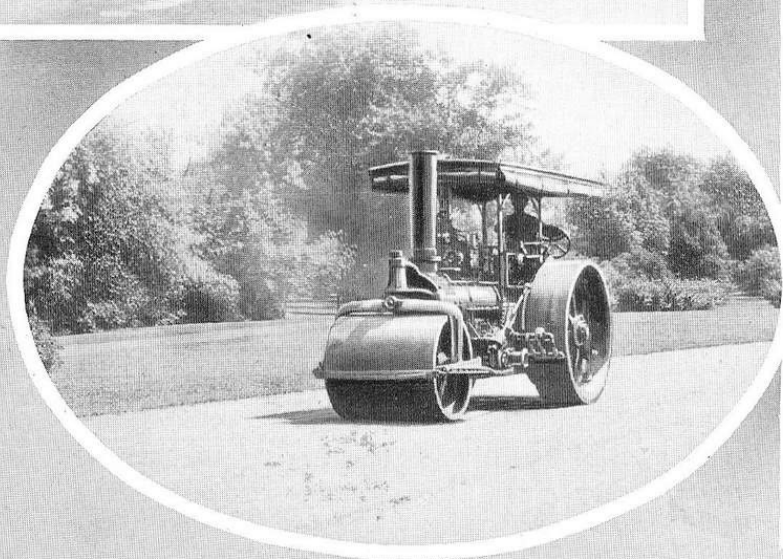
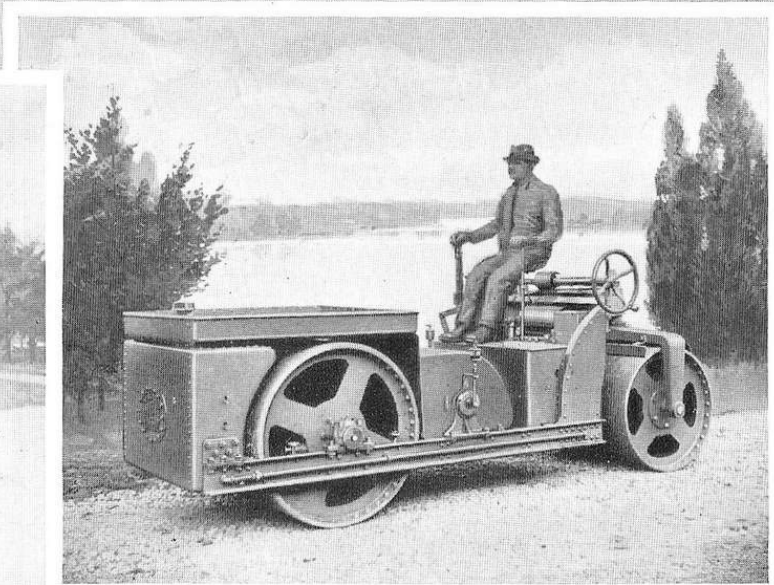
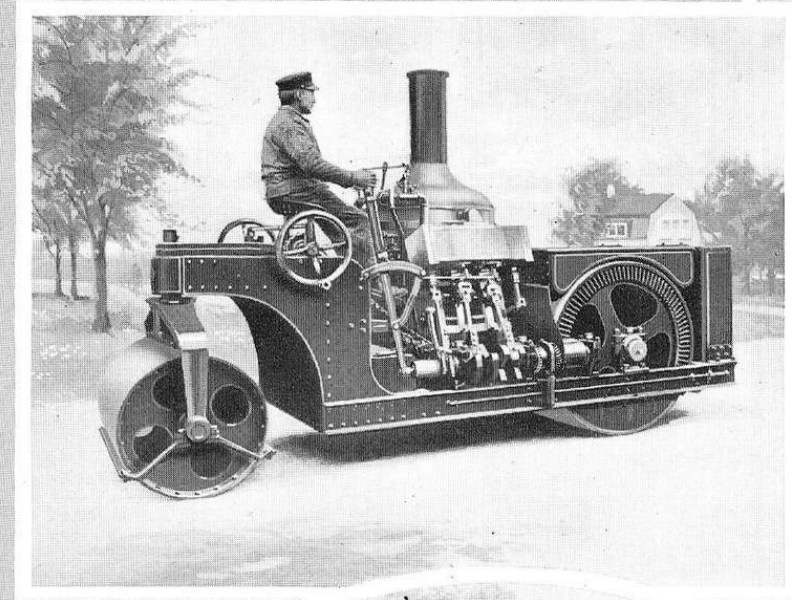
The motors of Buffalo-Springfield tandems are cooled by a special system that brings the circulating water into contact with a draft of air, preventing overheating under the most trying conditions.

Every Buffalo-Springfield motor tandem roller is provided with a steering mechanism which takes its power from the motor.

When so ordered, Buffalo-Springfield tandem rollers are equipped with sprinkling systems for wetting the rolls to prevent the adhesion of plastic material.

NO SHIFTING  
OF GEARS  
TO REVERSE





EARLY TYPES OF BUFFALO-SPRINGFIELD ROLLERS

## THE BUFFALO - SPRINGFIELD ROLLER COMPANY

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THE group of rollers illustrated on the opposite page is of interest not only in showing some of the developments in roller construction but in demonstrating the remarkable durability that is built into Buffalo-Springfield rollers. All of the machines shown are still rendering good service, although their ages range from seventeen years to thirty-four years.

The steam tandem at the upper left was built by this Company in 1892 and was of the Lindelof design, which was abandoned by this Company more than twenty years ago. The Buffalo-Springfield motor tandem at the upper right was the first tandem motor roller ever constructed. It was built in the year 1909. The Buffalo-Springfield three-wheel steam roller at the lower left was built in 1895; and the Buffalo-Springfield four-cylinder motor, three-wheel roller at the lower right was built in 1907, and it was probably the first three-wheel motor roller ever built in America.

Although these rollers have rendered remarkable service, The Buffalo-Springfield Roller Company has been able to improve greatly the design of each and, as constructed today, its products are unequalled.

Readers who may be interested in any of the types of rollers illustrated and briefly described in the foregoing pages are invited to request additional information, which will be promptly furnished in the form of detailed specifications and special bulletins. Specific information not found fully covered by such printed matter will be gladly given by correspondence.

THE BUFFALO-SPRINGFIELD ROLLER COMPANY

SPRINGFIELD, OHIO, U. S. A.

*Cable Address, "Roller—Springfield"*



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