

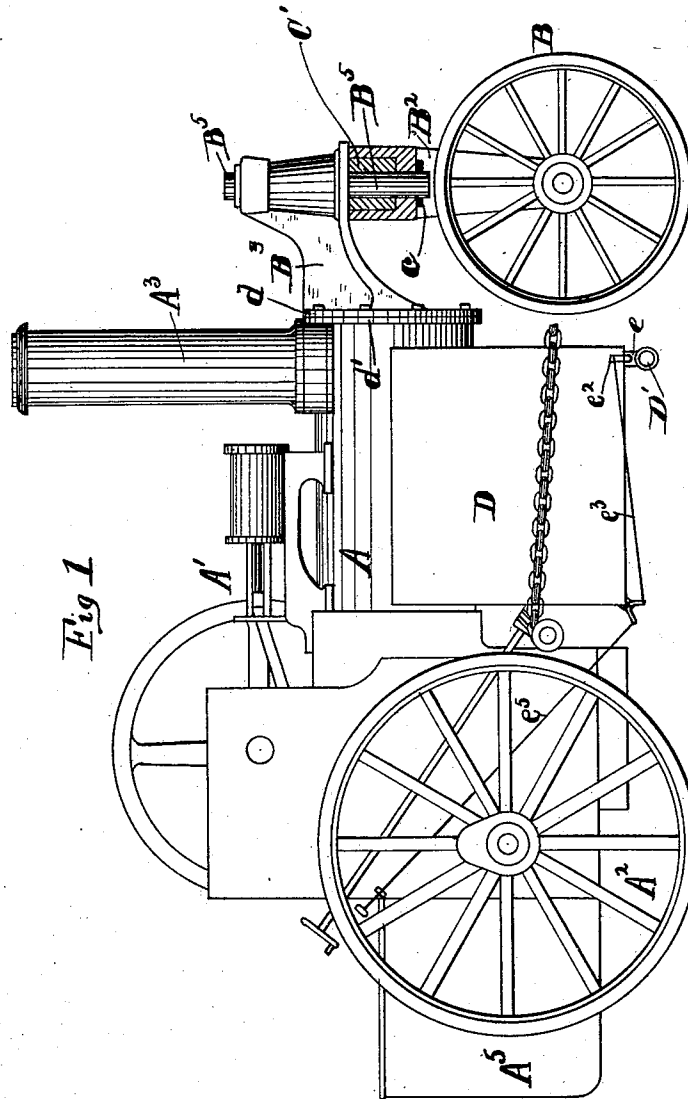
(No Model.)

2 Sheets—Sheet 1.

E. T. WRIGHT.
STEAM ROAD ROLLER.

No. 466,281.

Patented Dec. 29, 1891.



WITNESSES:

F. M. Jones.
W. L. Wood.

INVENTOR

Edward T. Wright

BY

Shelby and Shepherd

ATTORNEYS

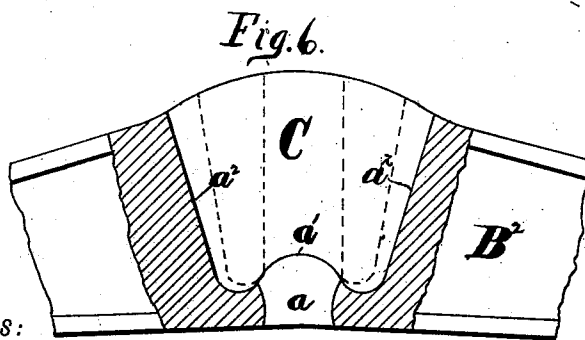
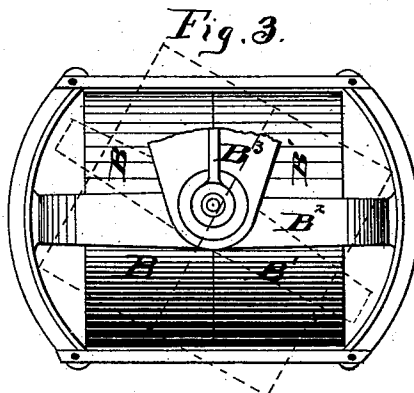
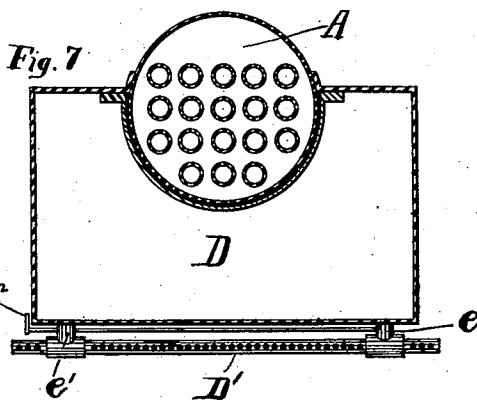
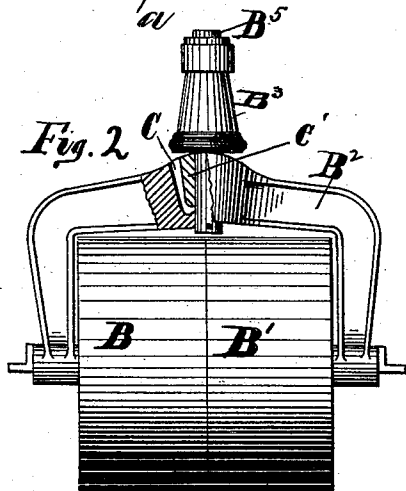
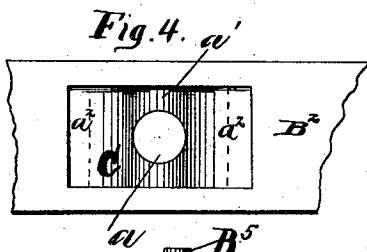
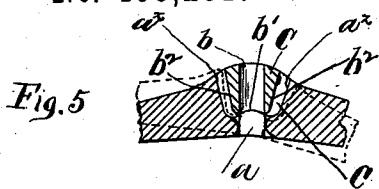
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2 Sheets—Sheet 2.

E. T. WRIGHT.
STEAM ROAD ROLLER.

No. 466,281.

Patented Dec. 29, 1891.



WITNESSES:
F. M. Jones
W. L. Wood.

INVENTOR
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UNITED STATES PATENT OFFICE.

EDWARD T. WRIGHT, OF SPRINGFIELD, OHIO, ASSIGNOR TO THE O. S. KELLY COMPANY, OF SAME PLACE.

STEAM ROAD-ROLLER.

SPECIFICATION forming part of Letters Patent No. 466,281, dated December 29, 1891.

Application filed March 23, 1891. Serial No. 385,967. (No model.)

To all whom it may concern:

Be it known that I, EDWARD T. WRIGHT, a subject of the Queen of Great Britain, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Steam Road-Rollers, of which the following is a specification.

My invention relates to improvements in steam-rollers, the invention being especially adapted to road-rollers such as employed in the construction of pavements for streets and similar purposes.

The object of my invention is to simplify the constructions heretofore employed in steam-rollers of this character.

My invention consists in the various constructions and combinations of parts hereinafter described, and set forth in the claims.

In the accompanying drawings, Figure 1 is side elevation, partly in section, of a machine embodying my invention. Fig. 2 is a partial front view of the same, showing the steering-wheels. Fig. 3 is a plan view of Fig. 2. Figs. 4, 5, and 6 are details of the fork for supporting the steering-wheels, showing the method of attaching the main frame and boiler thereto. Fig. 7 is a transverse sectional view showing the location of the supplemental tank and the sprinkling device, hereinafter more fully referred to.

Like parts are represented by similar letters of reference in the several views.

In the said drawings, A represents the boiler, A' the engine, A² the driving-wheels, A³ the smoke-stack, A⁵ the boiler-tender and feed-water tanks, the constructions of which are substantially the same as are already in use.

B B' are front supporting or steering wheels journaled in suitable bearings in a fork B².

To provide for the necessary movement of the front wheels B and B', to change direction and properly guide or steer the roller, and at the same time permit said wheels to rise and fall at each end independent of the boiler and the driving-wheels, I construct the top of the fork B² with a pocket C, provided at the bottom with an opening a, having on each side thereof and in a line at right angles to the axis of the wheels B and B' a convex

bearing-seat a'. Located in this pocket C is a movable block C', having a central opening b therein, and provided at the bottom with a concave bearing-seat b', adapted to rest on the bearing a', so as to bring the opening b in line with the opening a. This block C' is formed at the front and rear with straight walls, adapted to fit snugly in the pocket C, which is formed at the front and rear with corresponding straight walls, each of said parts being formed at the respective sides with angular walls a² a³ b² b³, and the block C' being considerably smaller in this direction than the pocket C, so as to permit a lateral rocking motion on the bearing-seat a'.

The saddle B³ is provided with a king-post B⁵, preferably formed of wrought iron or steel and cast permanently into the saddle B². This king-post B⁵ is adapted to enter the opening b in the block C' and pass through the same and through the opening a in the fork B² and thus connect the parts together. A small pin or other fastening c, preferably extending through the king-post B⁵ below the fork B², prevents the parts from becoming separated. The opening a at the bottom of the pocket C is made sufficiently large to permit the oscillation of the fork B² with reference to the saddle B³, the post B⁵, and the block C'. It will be seen that by this construction a loose connection is formed between the saddle and fork, which permits the wheels to turn on a vertical axis in changing direction and to rise and fall at either end to accommodate themselves to uneven surfaces, while at the same time a firm and rigid bearing is secured between the respective parts in the direction of the travel of the machine, by which all lost motion in this direction is prevented.

The saddle B³ is preferably formed of cast-iron and provided with a circular flange d, secured by bolts or otherwise to an annular ring or flange d', formed integral with or permanently connected to the boiler A at the front end of said boiler and in front of the smoke-stack A³, so that the saddle B³ is entirely forward of the boiler A, thus preventing the same from becoming heated by the products of combustion passing to the stack A³ and from cracking by condensation of steam from the smoke-stack, as frequently occurs when these

parts are extended back under the smoke-stack and about the boiler A.

In the operation of rollers of this kind it is desirable for some portions of the work that an increased weight be employed on the wheels, while in other cases it is desirable that this weight be dispensed with. To provide for securing a varying weight on the carrying-wheels which may be readily adjusted to the work to be performed, I employ between the front and rear wheels, and preferably connected to the boiler A, a supplemental tank D, adapted to be filled with water and having a capacity of one or more tons. This tank is preferably to be independent of the ordinary boiler-supply tanks A³, and is adapted to be filled to the required height to secure the additional weight necessary when a heavier load is desired—as, for instance, in finishing on street-work.

In connection with rollers of this kind it is customary to employ during certain periods of the work sprinkling-carts, which are caused to travel in front of the roller to better prepare the materials for the operation of the roller. To dispense with these sprinkling-carts and to provide for sprinkling directly from the roller, I preferably connect to the tank D a transverse pipe D', perforated throughout its length and preferably located at the bottom of said tank, to which it is connected through suitable supply-pipes *e e'*, having suitable cut-off valves controlled by an operating-lever *e*², adapted to be operated through suitable connections *e*³ *e*⁵, which are extended to within a convenient reach of the operator. Means are thus provided by which the material operated upon may be sprinkled down between the rolling-wheels and at such points and to the extent desired by the operator of the rolling device, who has direct control of said sprinkler. The use of the separate sprinkling-cart is thus not only obviated, but the sprinkling may be controlled by the operator, so as to wet down the stock or materials to be operated upon to the exact degree desirable.

Having thus described my invention, I claim—

1. The combination, in a steam-roller, with the steering-wheels, of a fork supporting said steering-wheels, a pocket in said fork open at the top, having a convex bearing-seat at the bottom, an oscillating block having straight sides at the front and rear adapted to fit into said pocket, with a concave bearing to rest on the bottom of said pocket, said block being adapted to move laterally in said pocket, a saddle connected to the main frame or boiler, and a swivel connection between said saddle and block, substantially as specified.

2. The combination, with a steering-fork and a front supporting-saddle, said steering-fork being provided with a pocket having a curved bearing-seat at right angles to the axis of the steering-wheels, of a movable block fitting at the front and rear in said pocket and adapted to oscillate laterally therein on the curved bearing-seat at the bottom of said pocket, and a swivel connection between the saddle and block, substantially as specified.

3. The combination, with a saddle having a downwardly-projecting king-post rigidly connected thereto, of a movable block provided with a central opening adapted to receive said king-post and swivel therein, a steering-fork having a pocket with straight walls at the front and rear to receive said block, which is formed with corresponding front and rear walls to fit in said pocket, and a curved bearing-seat at the bottom of said pocket, on which said block is adapted to oscillate laterally, said pocket being elongated in line with the axis of said fork to permit a lateral motion of said block in said bearing-seat, substantially as specified.

In testimony whereof I have hereunto set my hand this 10th day of March, A. D. 1891.

EDWARD T. WRIGHT.

Witnesses:

JAMES A. TODD,
CHAS. I. WELCH.