

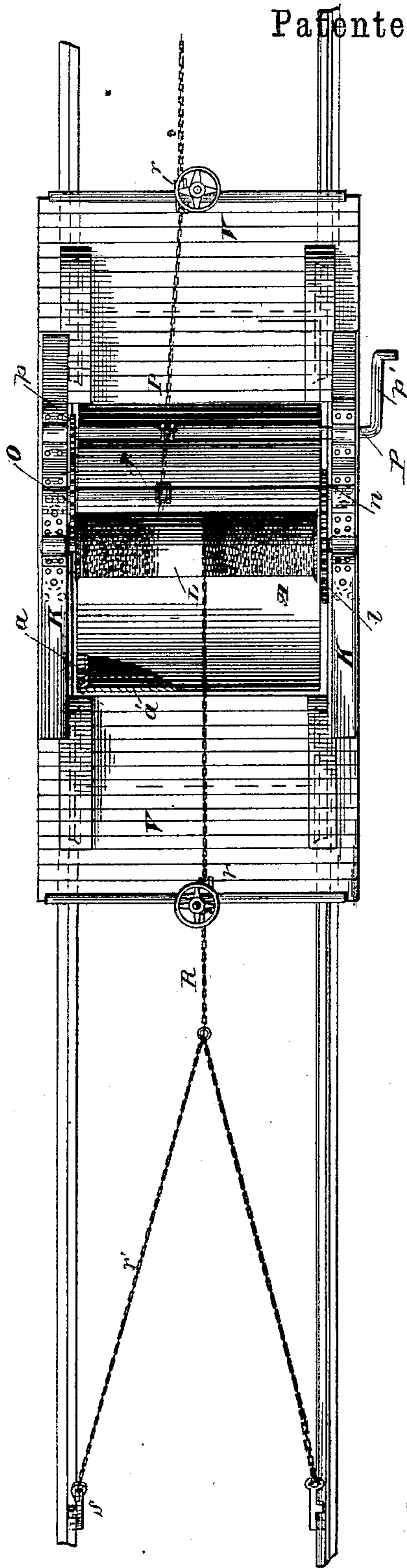
(No Model.)

2 Sheets—Sheet 1.

F. ORLIKOWSKI.
STREET ROLLER.

No. 394,129.

Patented Dec. 4, 1888.



Witnesses.
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(No Model.)

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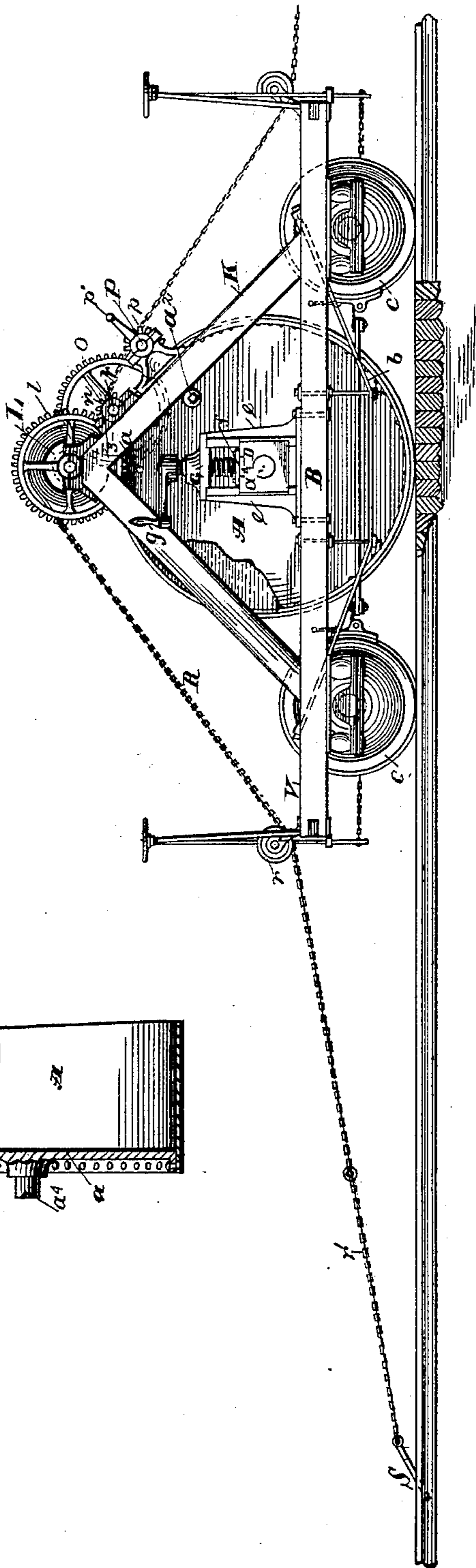


Fig. 2.

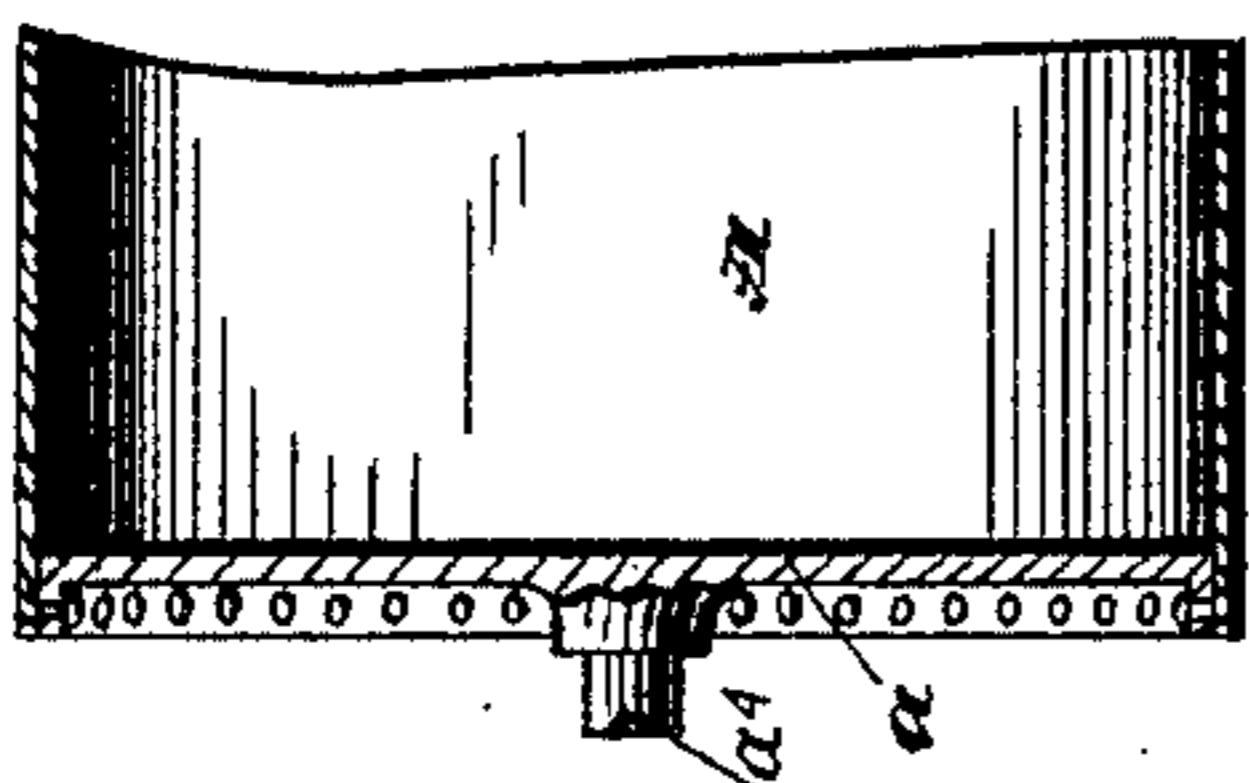


Fig. 4.



Fig. 5.



Fig. 3.

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UNITED STATES PATENT OFFICE.

FRANK ORLIKOWSKI, OF CLEVELAND, OHIO.

STREET-ROLLER.

SPECIFICATION forming part of Letters Patent No. 394,129, dated December 4, 1888.

Application filed June 30, 1888. Serial No. 278,622. (No model.)

To all whom it may concern:

Be it known that I, FRANK ORLIKOWSKI, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Street-Rollers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to street-rollers; and it consists in a roller-carriage borne upon suitable wheels, and provided at its center, within the carriage-frame, with a vertically-adjustable roller, all substantially as shown and described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of my improved roller. Fig. 2 is a side elevation of the same, the roller in both figures being shown on a car-track. Fig. 3 is an enlarged view of a section of the roller, showing how the heads and sides of the roller are connected. Fig. 4 is a view of the clamping-iron for engaging the rails by which the machine is drawn forward, and Fig. 5 is a view of said iron in position.

Heretofore, so far as I am aware, there has been no machine known which was adapted to run between the tracks of a street or other railway line and press the stone or paving material into position, and hence it has always been necessary to employ a number of men with beetles, and they are expected to do no other work. My invention is designed to do this work by means of a roller, which, in the long run, works a great saving and is much better in its results. To this end I employ a roller, A, (shown here as made with cast-metal heads *a* and heavy boiler-iron sides *a'*), riveted firmly upon the flange of the heads, as shown in Fig. 4, thus forming a hollow cylindrical roller that is firm and durable in construction. Of course the roller is not limited to this particular material, as all or either of the parts put together might be cast, or all or either made of boiler-iron or other metal; but in any case the structure must be firm and of considerable weight. Usually a diameter of five to six feet will answer the purpose, and

the length of course will be governed by the width of the track, the purpose being to run just between the rails and to reach the entire space from rail to rail. The roller is further provided with a plugged opening, *a*², through which it is filled with water to give it increased weight, and the air-vent *a*³, which likewise is plugged when the roller has been filled for use.

B represents a rectangular frame supported on four car-wheels, C, like an ordinary street-car, and strengthened by a truss, *b*, on either side. The roller A occupies a space between the front and rear wheels of the car, and has journals *a*⁴, which are formed on the heads *a*, and working within the bearings D.

In this connection I may state that two things are desirable. One is that the roller should be elevated so as not to touch the ground when the car is taken to and from work, and the other object is to have the roller adjustable with reference to the road-bed, so that the pavement may be pressed to greater or less depth, according to circumstances. Of course the character of the work when it leaves the stone-layer's hands is subject to many variations, dependent on the quality and firmness of the underlying road-bed, the depth at which the stones are laid with reference to the level of the track, the service for which the road is prepared, whether for horse-cars or motor-cars, and like uncertain conditions. I have therefore provided an arrangement which will adapt the roller to all such exigencies, which consists of two standards, *e e*, between which all the blocks or bearings D are supported and vertically adjustable by means of screw-rods F, having heads *f* firmly secured to said bearings.

Across the top of the standards is a screw-threaded cross-piece, G, which serves as a nut for screw F, and at the top of the screw is a removable crank-handle, *g*, by which the screw is turned. Both sides are equipped alike in this particular, and both are separately adjustable. By this means I can raise the roller entirely off the pavement and throw the whole weight on the car, or can so adjust it that not only its own weight, but all the weight of the car, will be transferred to the roller. The range of adjustment is between these ex-

tremes and is ample for all purposes. Having the car thus equipped, I draw it slowly over the track by means of mechanism mostly supported on the car itself. To this end I provide a \wedge -shaped frame, K, on either side of the car, on the apex of which is supported a windlass, L. The windlass has a gear-wheel, l , at one end, which meshes with a pinion, n , on a counter-shaft, N. On this shaft is a gear, O, which meshes with a pinion, p , on shaft P, having a crank-handle, p' , at one end.

On each end of the windlass is wound a chain or cable, R, the free ends of which may be run any desired distance to the front and rear of the car, respectively—say fifty or a hundred feet. These cables are passed beneath sheaves r at the ends of the car to bring the draw at the right place, and have short cables r' , by which they are connected to the clamping-irons S, which lock the flanges of the rails and form a fulcrum from which the car can be run in either direction.

The cables R are oppositely wound on the windlass, so that when one is wound, as when the car is moved forward, the other is unwound and does not interfere with its movement, and, both cables being taut, the operator can run the car either direction by simply reversing the movement of the windlass. This puts the car completely under the control of the operator, and he can pass the roller back and forth over the pavement as often as may be found necessary; but experience has demonstrated that one or two impressions by the roller answer every purpose.

The car-frame is covered fore and aft of the roller with a platform, V, and this platform may be loaded with iron bars, stone, or other heavy articles, so as to increase the weight of the roller to almost any extent, if desired. Ordinarily a weight of seven to nine tons is found sufficient; but this weight can easily be increased in the manner indicated, the whole weight of the roller, car, and load being available when needed.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In street-rollers, a car-frame and wheels upon which the frame is supported, in combination with a roller between the front and rear wheels supported in vertically-adjustable bearings, substantially as set forth.

2. In street-rollers, a cylindrical roller provided with journals, a frame supported on wheels and having standards at its sides, and adjustable bearings for the journals within said standards, substantially as set forth.

3. In street-rollers, a car-frame having wheels and a roller between the wheels, \wedge -shaped frames on the car-frame, a windlass on a shaft at the apex of the frames, a counter-shaft, and a shaft with a handle and intermediate gear for turning the windlass, substantially as set forth.

4. In street-rollers, a car-frame on wheels, said frame having standards on either side about its center, in combination with a cylindrical hollow roller filled with water, journals on the end of the roller, bearings for the journals between the said standards, and screws having nuts supported on the standards, and handles on the screws for vertically adjusting the rollers, substantially as set forth.

5. In street-rollers, a frame on wheels and a vertically-adjustable roller between the wheels, in combination with a windlass, cables on the windlass extending in opposite directions beyond the ends of the car, and devices for temporarily fastening the loose ends of the cables, whereby the car may be impelled forward or backward at will, substantially as set forth.

In testimony whereof I hereunto set my hand this 16th day of June, 1888.

FRANK ORLIKOWSKI.

Witnesses:

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H. T. FISHER.