

(No Model.)

J. RADOMSKI.
STREET CAR MOTOR.

2 Sheets—Sheet 1.

No. 531,275.

Patented Dec. 18, 1894.

Fig. 5 - B

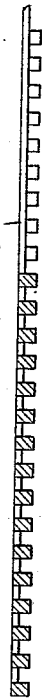


Fig. 1 -

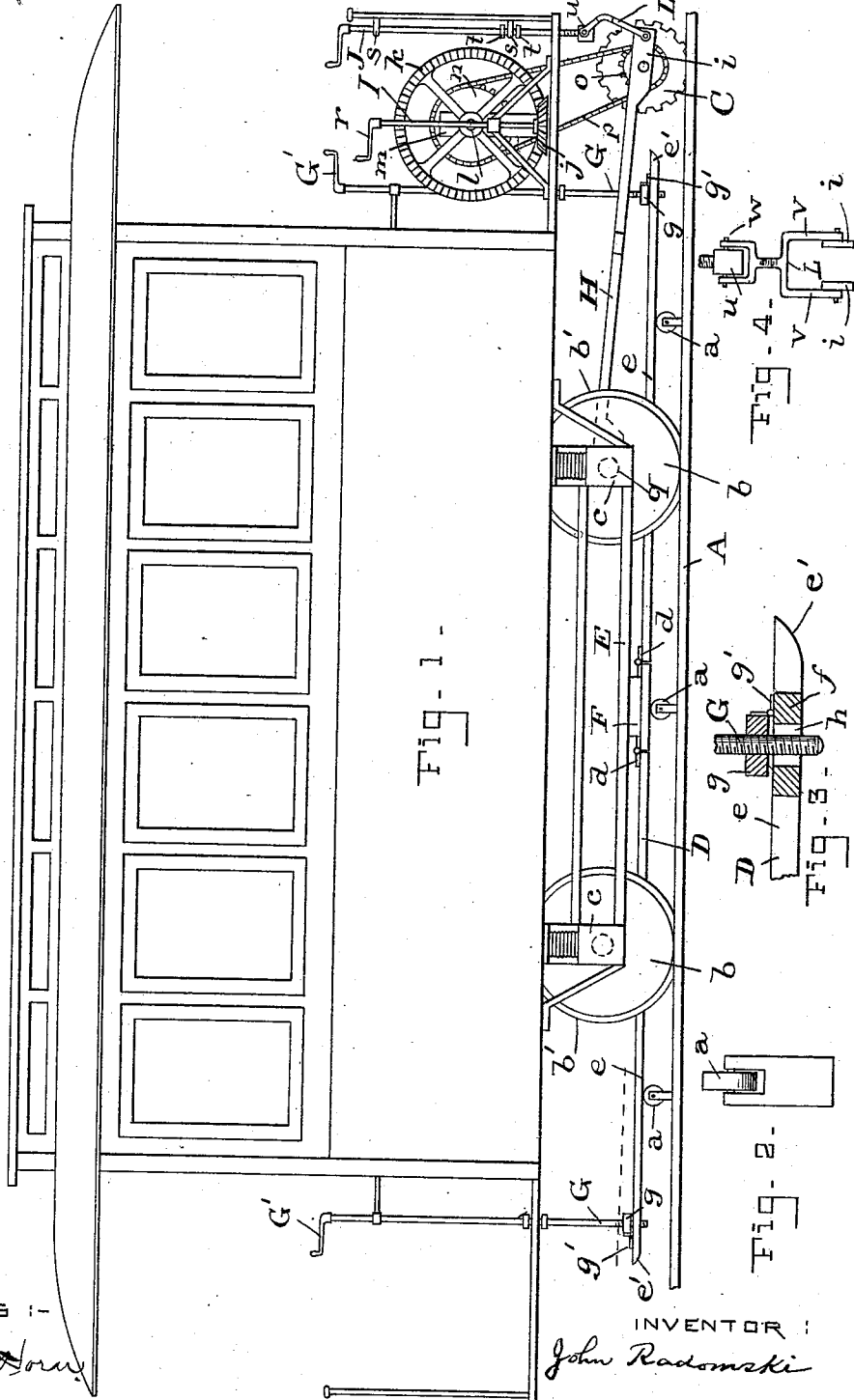


Fig. 2 -

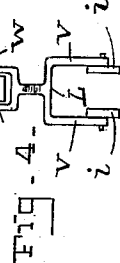


Fig. 3 -

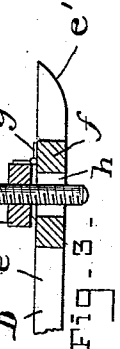
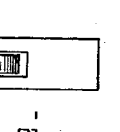


Fig. 4 -



WITNESSES :-

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Charles B. Mann Jr.

INVENTOR :

John Radomski

By Chas B. Mann

ATTORNEY.

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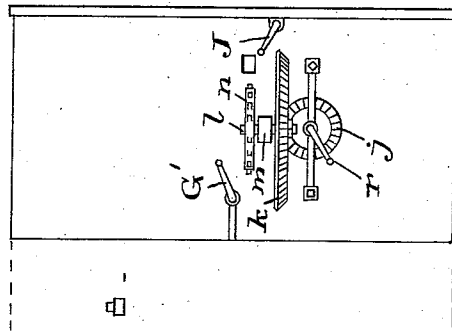
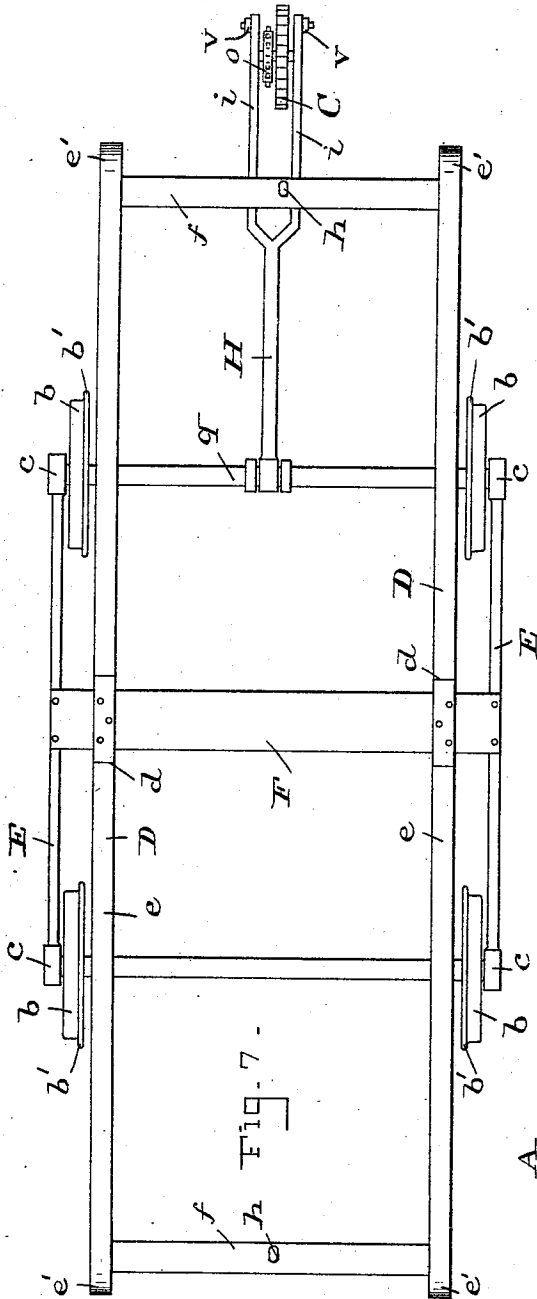


Fig. 8 -

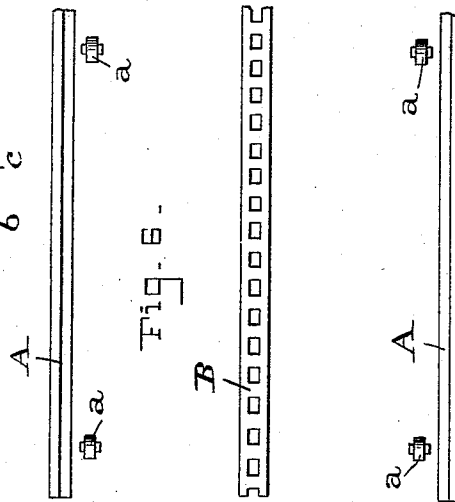


Fig. 9 -

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UNITED STATES PATENT OFFICE.

JOHN RADOMSKI, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-HALF TO
MIECZYSLAW BARABASZ, OF SAME PLACE.

STREET-CAR MOTOR.

SPECIFICATION forming part of Letters Patent No. 531,275, dated December 18, 1894.

Application filed July 13, 1894. Serial No. 517,431. (No model.)

To all whom it may concern:

Be it known that I, JOHN RADOMSKI, a subject of the Czar of Russia, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Street-Car Motors, of which the following is a specification.

This invention relates to an improvement in motor mechanism for the propulsion of cars.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a car provided with my improvements. Fig. 2 is an elevation of one of the track rollers. Fig. 3 is a section view, enlarged scale, showing the construction where the screw is attached to the pressure frame. Fig. 4 is a front view of the yoke which connects the screw with the motor-wheel draw-bar. Fig. 5 shows in part a vertical longitudinal section of the rack-bar. Fig. 6 is a plan view of a portion of the car-track, rack-bar and rollers as they lie on the ground. Fig. 7 is an inverted plan view or bottom of the running-gear of the car, and shows the pressure-frame. Fig. 8 is a plan view of the car platform showing the position of the mechanism.

The two track rails, A, may be of any approved form. A rack bar, B, extends longitudinally between the two track rails where it is permanently secured. This rack-bar serves for the engagement of a toothed motor wheel, C, on the car. The track is also provided between its two rails with rollers, a, which are arranged in two longitudinal lines, as seen in the plan view in Fig. 6. These rollers in the two lines are spaced apart longitudinally at short intervals, so that a space along the track equal to a car's length shall have three or four rollers. The rollers project a little above the track rails.

The ordinary car-wheels, b, have flanges, b', and rest on the track rails, A, in the usual manner, and a pressure frame, D, is fixed on the car below the car-axles. This frame is shown in Figs. 1 and 7. Longitudinal bars, E, connect the two axle boxes, c, at each side, and a transverse bar, F, is supported on these two bars. This transverse bar passes underneath the car from one side to the other. This transverse bar, F, therefore, has a certain

definite height with respect to the tread of the car wheels, and this frame slides over the rollers, a. To this transverse bar the two sections, D, of the pressure frame are secured by hinges, d, and from said hinges each frame projects toward the car-end and said projecting end may be raised or lowered. Each frame, D, comprises two parallel longitudinal bars, e, see Fig. 7, which are connected near the car-end by a cross-bar, f. The end of each bar, e, has a bevel, e', or up-slant, on its lower side to insure it taking readily over the rollers, a.

The end of the pressure-frames at the hinges, d, is not capable of being raised or lowered, but the other end, e', of each frame may be slightly raised or lowered by means of one or more vertical screws, G, fixed on the truck or car. In this instance, and for the purpose of illustration, one screw is on each end of the car.

The cross-bar, f, which connects the two parallel longitudinal bars, e, has a nut, g, secured by a hinge, g'. The cross-bar has a hole, h, and the hinged nut, g, is on the upper side of the cross-bar and over said hole. The lower end of the adjusting screw, G, takes into the hinged nut and projects down into or through the hole, h, in the cross-bar. The upper end of the screw, G, may have a crank handle, G', to facilitate turning it. While one screw, G, only is shown to adjust the free end of each pressure-frame, it is obvious two screws may be employed therefor.

In the operation of the device when the car is running, that particular frame, D, which has its free end, e', pointing forward, in the direction in which the car is moving, is intended to be slightly raised by the screw, G, so that the frame will readily take over the rollers, a.

The weight of the car may be chiefly or wholly supported by the frame, D, resting and traveling on the rollers, a, while the flanges, b', of the wheels, b, keep the car from deviating laterally.

The teeth of the motor wheel, C, engage with the teeth of the rack bar, B, and mechanism is employed to impart motion to the wheel, and thereby the car is propelled. The motor wheel C is mounted between the two

arms, *i*, of a draw-bar, *H*, which has its end pivoted on the car-axle, *q*, so as to admit of the motor wheel, *C*, being raised and disengaged from the rack-bar, *B*.

5 The mechanism for revolving the motor wheel, in the present instance, comprises a vertical shaft, *l*, on which is a bevel gear, *j*, which engages with a bevel gear, *k*, on a shaft, *l*, mounted on a standard, *m*. The shaft, *l*, also has a sprocket wheel, *n*. The motor wheel, *C*, has at its side a sprocket wheel, *o*, and a drive chain, *p*, passes over the two sprocket wheels, *n*, *o*. The shaft, *l*, has a crank handle, *r*. By turning the shaft motion will be
10 imparted to the motor wheel, *C*. I wish it understood that I contemplate applying suitable power to impart motion to the motor wheel.

A vertical screw, *J*, serves to raise and lower
20 the draw-bar and motor wheel, *C*. This screw turns in bearings, *s*, but has two collars, *t*, one above and the other below one of the said bearings so as to prevent the screw while turning from endwise movement. The lower
25 end of the screw enters a nut, *u*; and a yoke, *L*, connects the said nut with the two arms, *i*, of the draw bar, *H*. The yoke, *L*, is shown in Figs. 1 and 4. The lower part of the yoke has two pendent arms, *v*, each of which is
30 pivoted to one of the arms, *i*, of the draw-bar. The upper part of the yoke is connected by a pivot, *w*, to the nut, *u*. When a car has reached the end of its route, or when it is desired to switch a car, or for other reasons, the
35 screw, *J*, may be turned and thereby the motor wheel, *C*, may be lifted and disengaged from the rack-bar, *B*.

I may vary the construction of this device, and modify the form of the parts here shown,
40 and still keep within the scope of my invention.

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

45 1. The combination of the two track rails; rollers on the road bed between the two track rails arranged in two longitudinal lines and spaced apart; a car provided with flanged wheels to traverse the track rails; a trans-
50 verse bar, *F*, underneath the car; and a pressure-frame below the car-axles and having one end hinged to the said transverse bar and the other end free to be raised or lowered,—said

frame to rest upon and traverse on the said rollers on the road bed.

2. The combination of the two track rails; 55 rollers on the road bed between the two track rails arranged in two longitudinal lines and spaced apart; a car provided with flanged wheels to traverse the track rails; a pressure-
60 frame on the car below the car-axle and hinged at one end,—said frame to traverse upon the rollers on the road bed; and a screw co-acting with the free end of the pressure-frame to raise and lower it.

3. The combination of the two track rails; 65 rollers on the road bed between the two track rails arranged in two longitudinal lines and spaced apart; a car provided with flanged wheels to traverse the track rails; a pressure-
70 frame on the car below the car-axles and hinged at one end,—said frame to traverse upon the rollers on the road bed; a nut hinged to said pressure-frame; and a screw on the car—the said screw taking into the hinged
75 nut.

4. The combination of the two track rails; a rack-bar on the road bed between said track rails; a car provided with wheels to traverse
80 the rails; a draw-bar having one end pivoted to the car and the other end provided with two arms; a motor wheel, *C*, mounted between said arms of the draw-bar and having teeth to engage with the rack-bar; mechanism to
85 impart motion to said motor wheel; and means to raise and lower the draw-bar and motor wheel.

5. The combination of the two track rails; a rack-bar on the road bed between said track rails; a car provided with wheels to traverse
90 the rails; a draw-bar having one end pivoted to the car and the other end provided with two arms; a motor wheel, *C*, mounted between said arms of the draw-bar and having teeth to engage with the rack-bar; mechanism to
95 impart motion to said motor wheels; a screw on the car; a nut into which the lower end of the said screw enters; and a yoke connecting the said two arms of the draw-bar and the nut.

In testimony whereof I affix my signature in
100 the presence of two witnesses.

his
JOHN X RADOMSKI.
mark

Witnesses:

MIECZYSLAW BARABASZ,
CHAS. B. MANN, Jr.