E. MATTESON.

APPARATUS FOR THE PURPOSE OF LOCOMOTION.

No. 32,447. Patented May 28, 1861.

Fig. 4.

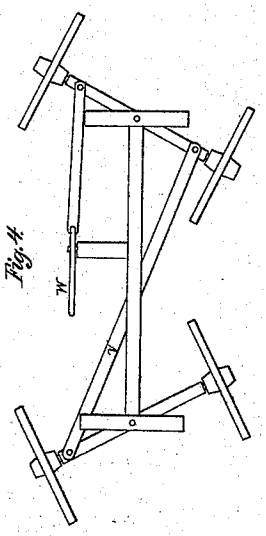


Fig. 3.

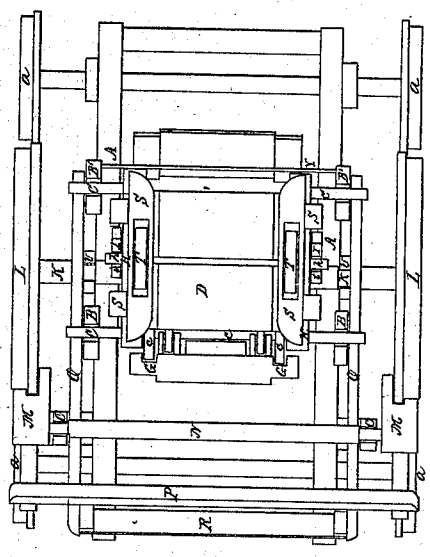


Fig. 2.

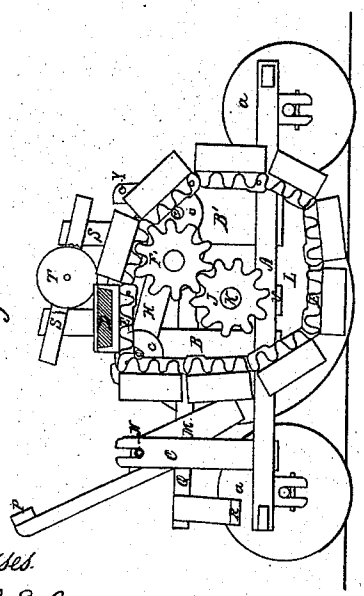
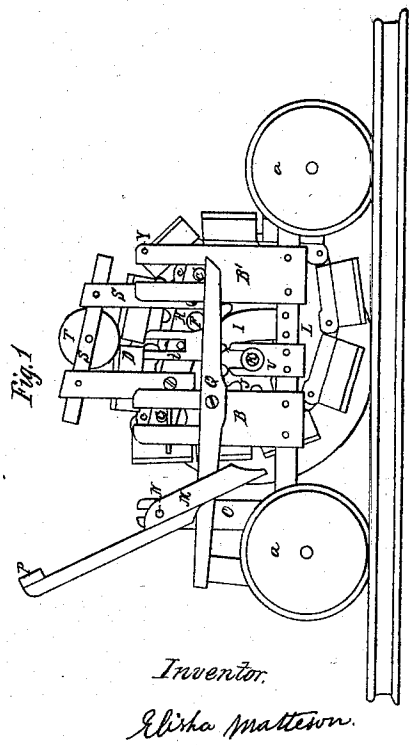


Fig. 1.



Witnesses.

Jas. McGarry

Geo. W. Hunt

Inventor.

Elisha Matteson.

UNITED STATES PATENT OFFICE.

ELISHA MATTESON, OF BROOKLYN, NEW YORK, ASSIGNOR TO LOUIS D. TOWSLEY, OF NEW YORK, N. Y.

APPARATUS FOR LOCOMOTION.

Specification of Letters Patent No. 32,447, dated May 28, 1861.

To all whom it may concern:

Be it known that I, ELISHA MATTESON, of Brooklyn, Kings county, and State of New York, have invented, made, and applied to use a new and Improved Apparatus for Purposes of Locomotion; and I do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, in which—

Figure 1 is a side elevation of my improved apparatus, the driving wheel being not shown for the purpose of showing more fully the parts of said apparatus; Fig. 2, a vertical cut section of the same; Fig. 3, a top view of the same, in which the driving wheel is shown; Fig. 4, a view of steering apparatus employed, when my improved apparatus is used on common roads.

In the drawings, similar letters of reference indicate like parts of the invention.

The nature of the invention made by me, consists in the construction and operation of a new and improved apparatus for the purpose of locomotion as hereinafter set forth.

To enable others skilled in the arts to make and use my invention I will proceed to describe its construction and operation.

A shows the frame of a carriage or car, resting upon the axles of the wheels *a*, *a*, *a*, *a*.

B and B′ are standards supporting the shafts C, C′. Upon said shafts C, C′, are placed the supporting rollers *c*, *c*, *c*, *c*.

D is a platform made in sections, hinged together, said sections being made of cast-iron, cast with a flange around their upper edges, similar to an oblong square pan and which sections are fitted with rubber, wood or other suitable material to soften or deaden the tread, while in operation. On the under side of said platform D, are secured or cast the cleats or cogs E, E, which form in connection with each other a continuous rack. The platform D is supported upon the rollers *c*, *c*, *c*, *c*, and the periphery of the cog-wheel F; said rollers *c*, *c*, *c*, *c* being confined in grooves G, G cut lengthwise with said platform D on its under side near the outer edges of the sections.

On either side of the platform D are placed the supports H, H, their studs or axles *h*, *h* resting in the slots *i*, *i* of the standards I, I. The said supports H, H are suspended at one end on the shaft C, the shaft C′ passing through their other ends. The shaft C′ with its rollers *c*, *c*, is thus held in position by the supports H, H, which also form the supports or journals for the shaft upon which the cog-wheel F is placed. This cog-wheel F meshes into cog-wheel J upon the driving shaft K, to the outer ends of which are secured the driving wheels L, L.

M, M are brakes applied to the periphery of the driving wheels L, L, suspended on the shaft N, said shaft resting in the slots of the standards O, O, the outer or lever ends of which are connected by the cross-bar P.

To the standards B, B are firmly bolted the levers Q, Q, the shorter or fulcrum ends of which rest under the projecting ends of the shaft C′; the outer ends of said levers Q, Q are also connected by the cross-bar R.

To the connecting supports H, H, are firmly secured the upright frames S, S, into the center bar of which and directly over the platform D are suspended the rollers T, T, which keep the said platform D or sections, with its cogs E, E in position upon the periphery of the cog-wheel F, into which said cogs E, E enter and have their bearing.

U, U are standards firmly secured to the frame A and form the supports or journals for the driving shaft K′.

Extending across and directly over the platform D is the check-bar Y, secured at its ends into the standards B′.

In Fig. 4 of the drawings accompanying this specification, I have shown a new and improved method for steering my improved apparatus, when used on common roads. In this steering apparatus, the axles are connected by a diagonal brace V and by the employment of the hand lever W, are thrown into a radiating position and the wheels upon said axles into a circular position or segments of a circle, as shown. By means of said lever and axles so connected, the operator has complete and prompt control of the vehicle, while in motion.

Operation.—The operator upon assuming a position upon the platform D (either standing or sitting upon a seat arranged for the purpose) advances his foot as in the act of walking and by throwing his weight upon the same, thus gives a backward motion to the platform D and a prompt and rapid forward motion to the vehicle to which the herein described apparatus is attached. By means of the rack E on the under side of

platform D motion is imparted to cog-wheel F, cog-wheel J on shaft K′ and driving wheels L, L attached to shaft K′. When the said apparatus is attached to a car, a horse or horses are employed, the operator takes a position upon the end of said car and controls the same by means of the levers Q, Q and the brakes M, M. By bearing down upon the connecting cross-bar P, the brakes M, M are brought to bear firmly against the periphery of the driving wheels L, L, instantly checking all forward motion, if required or upon descending a hill or inclined plane, the levers Q, Q, may be applied and by bearing down the cross-bar R, the fulcrum ends of said levers Q, Q are brought to bear up against the shaft C′ upon which the rollers *c*, *c*, and supports E, E are attached, raising the platform D up against the cross-bar Y and the cog wheel F out of gear with the cog-wheel J, thus checking any further motion of platform D and driving wheels L, L. The position of the inclined platform D may, (if required) be reversed and made to operate in an opposite direction, which is effected by removing the pins supporting the shaft C, in the slot of the standard B, and by raising shaft C′, and inserting the pin under said shaft, in a corresponding position into the standard B′, in which case a set of levers corresponding to Q, Q, would be required which may be placed on the inside of standards B, B′, which levers would be operated from the opposite end of the apparatus.

Advantages.—In the gain of distance: For instance, a pedestrian in stepping forward an ordinary step, say twenty seven inches upon the platform (which gives one turn of the cog-wheel upon the driving shaft) is carried forward a distance of some seven to ten feet according to the diameter of the driving wheels. Secondly: The ordinary exertion required in walking is all that is required to operate my improved apparatus, as the weight of the operator upon the inclined platform, is sufficient to operate the same. Third: In applying my improved apparatus to city railroads, where horses are now used for dragging the same, the weight of the horse in the said operation, is a material gain, as much as the distance traveled by the driving wheels would be over one step taken by said horse in dragging a car or vehicle in the ordinary way and a further gain in wear and tear of horse flesh of at least fifty per cent. In the descent of a hill or inclined plane, the horse may stand still and the car descend by its own gravity, as the platform may be readily thrown out of gear by the levers, and the speed or velocity of the apparatus can be regulated by the brakes as herein described.

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

1. The use or employment of the platform D in combination with the driving wheels L, L, the brakes M, M and the levers Q, Q arranged and operating in the manner and for the purpose or purposes herein set forth and specified.

2. The brakes M, M and levers Q, Q suspended and connected by their cross-bars in the manner herein set forth and for the purpose or purposes specified.

ELISHA MATTESON.

In presence of—
A. SIDNEY DOANE,
TH. MEGARRY.