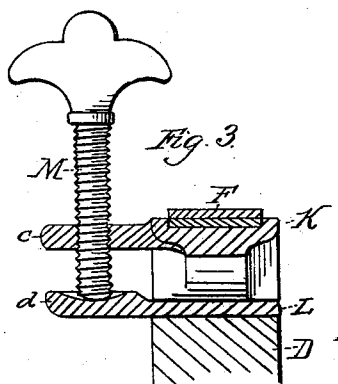
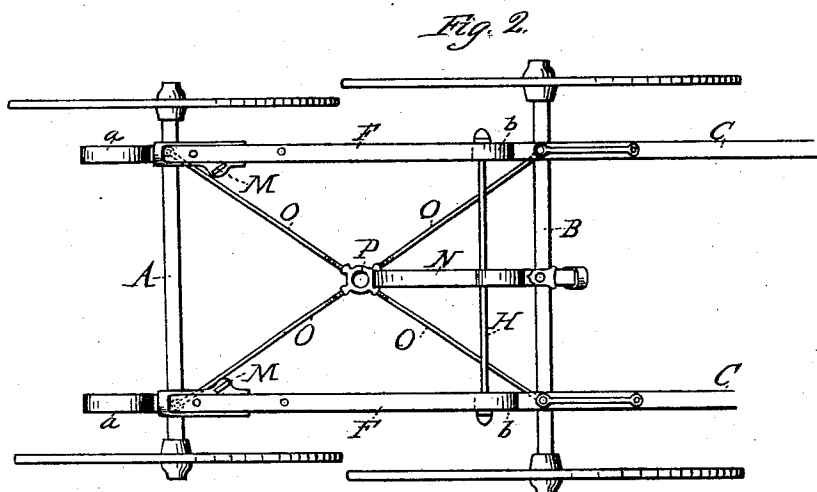
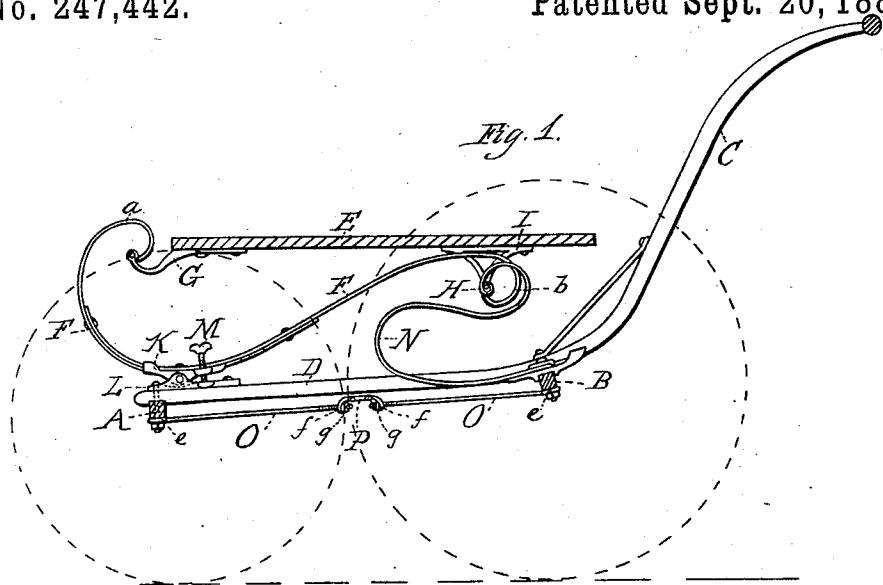


(No Model.)

O. UNZICKER.
CHILD'S CARRIAGE.

No. 247,442.

Patented Sept. 20, 1881.



Witnesses:
F. B. Townsend
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UNITED STATES PATENT OFFICE.

OTTO UNZICKER, OF CHICAGO, ILLINOIS, ASSIGNOR TO ADOLPH SHOENINGER, OF SAME PLACE.

CHILD'S CARRIAGE.

SPECIFICATION forming part of Letters Patent No. 247,442, dated September 20, 1881.

Application filed April 18, 1881. (No model.)

To all whom it may concern:

Be it known that I, OTTO UNZICKER, of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Children's Carriages, of which the following is a specification.

My invention relates to the running-gear of children's carriages; and it consists, first, in peculiar springs, which support the body, both at the front and rear, from a connection with the forward portion of the running-gear, and permit the body to spring vertically at the front end, while they give an exceedingly easy and elastic movement to the rear of the body; second, in simple and efficient means for adjusting such springs so as to tip the body to such an inclination that it will be depressed to a horizontal position, or as near that position as desired, by the weight of the child; third, in a peculiar spring-connection between the rear end of the body and the running-gear, for restraining or controlling by a yielding stop the upward movement or recoil of such body; and, fourth, in a peculiar adjustable reach, which can be set to keep the reach-frame rectangular, so that the carriage will always run true, all as fully hereinafter explained, and pointed out by the claims.

In the accompanying drawings, forming a part hereof, Figure 1 is a vertical longitudinal section of the running-gear and the bottom board of the body; Fig. 2, a top view of the same parts with the bottom board and hangers removed, and Fig. 3 a vertical cross-section through one of the supporting-springs on the line of the adjusting-screw.

Like letters denote corresponding parts in all three figures.

A and B are the front and rear axles of the carriage. C C are the handles, which preferably have extensions D secured by bolts to the front and rear axles, near the ends thereof, and forming the side bars of the reach.

E represents the bottom board of the carriage-body.

F F are the supporting-springs of the carriage. These are scroll-springs whose front portions are bent upward in front of the carriage-body with an outward curve. The forward

ends, *a*, of the springs are bent downward and connected with hangers G, which are secured to the body-bottom E, and project in front of the body. The springs F F are secured to the side bars, D, of the reach, near the front axle, in a manner to be presently described, and from these points of attachment the rear portions of the springs project horizontally to the rear and upward with a compound curve. The rear ends, *b*, of the springs are curved downward and connected with a cross-rod, H, secured at its end to hangers I, which are fastened to the body-bottom E. These springs, it will be seen, support the body at the front and rear from the forward portion of the running-gear. The body can be depressed at the front; but the principal elasticity is obtained from the long rearward extensions of the springs, which allow the rear of the body to spring up and down with an exceedingly easy movement. These springs, by reason of their double attachment to the carriage-body, are also very durable and not liable to break in use.

The shoe-plates K of the springs F F are pivoted, so as to rock vertically, to plates L, which are secured to the forward ends of the side bars, D, by bolts, the forward ends of such plates L being held by the same bolts that secure the front axle and the side bars together. Each plate K, in the rear of its pivot, has a lateral projection, *c*, below which is a similar projection, *d*, on the plate L. Through a screw-threaded hole in each projection *c* turns a thumb-screw, M, such thumb-screw setting against the projection *d*. By turning the thumb-screws M the plates K will be rocked on the plates L, and the rear portions of the springs F will be thrown up or down, as desired. By these means the springs can be adjusted to the weight of the child, the carriage-body being set at such an inclination that the weight of the child will depress the body to a horizontal line, or as near that position as desired.

N is a leaf-spring, which is secured to the center of the rear axle and to the cross-rod H. When in position on the carriage this spring resembles somewhat the shape of the letter S. It is tempered in a form more contracted vertically than the shape it has on the carriage,

so that it draws down on the rear end of the carriage-body. This spring is used, in place of a leather strap, to limit the upward movement or recoil of the carriage-body; but it is much better than a strap, for the reason that it forms a yielding resistance and does not bring the movement to a sudden stop.

In order to brace the reach-frame so as to keep it rectangular and make the wheels run true, I provide the carriage with a peculiar adjustable reach. Four metal rods, O, have eyes *e* in their outer ends, which are held by the bolts that secure the side bars, D, and the axles together. These rods project diagonally toward the center of the reach-frame, and at their inner ends pass through vertical lugs *f* on a center plate, P. These rods O have screw-threaded inner ends, which receive nuts *g*, by which they are adjusted. The diagonal rods O can be adjusted so that the axles and side bars will be exactly at right angles with each other, and the wheels will always run true.

What I claim as my invention is—

1. In a child's carriage, the combination, with the body-bottom and side bars, of the springs F, hangers G I, cross-rod H, scroll N, plates

L, having projection *d*, shoe-plates K, pivoted thereto, and having projection *e*, and the thumb-screws M, substantially as and for the purpose set forth.

2. In a child's carriage, the combination, with the body and running-gear, of the adjustable springs F F, connected at their ends with the front and rear portions of the body, and at single intermediate points with the forward part of the running-gear, and the spring-stop N, substantially as described and shown.

3. In a child's carriage, the adjustable diagonal reach-rods O, substantially as described.

4. In a child's carriage, the combination, with the axles A B and side bars, D, of the adjustable diagonal reach-rods O, substantially as described and shown.

5. In a child's carriage, the diagonal reach-rods O, in combination with the center plate, P, to which said rods are adjustably connected, substantially as described and shown.

OTTO UNZICKER.

Witnesses:

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