J. A. & G. W. CONOVER.

Children's Carriages.

No. 154,458. Patented Aug. 25, 1874.

FIG I

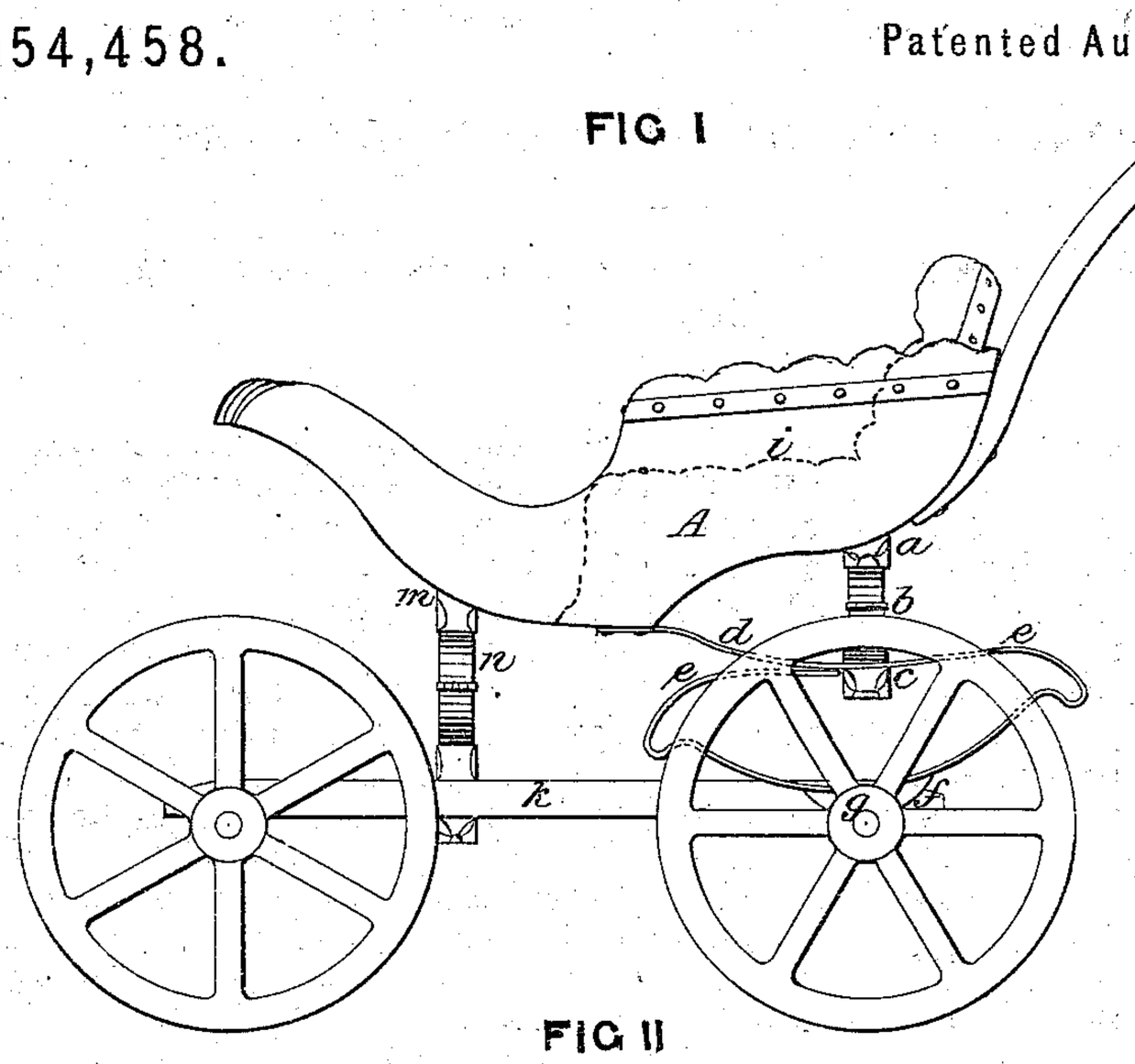

FIG II

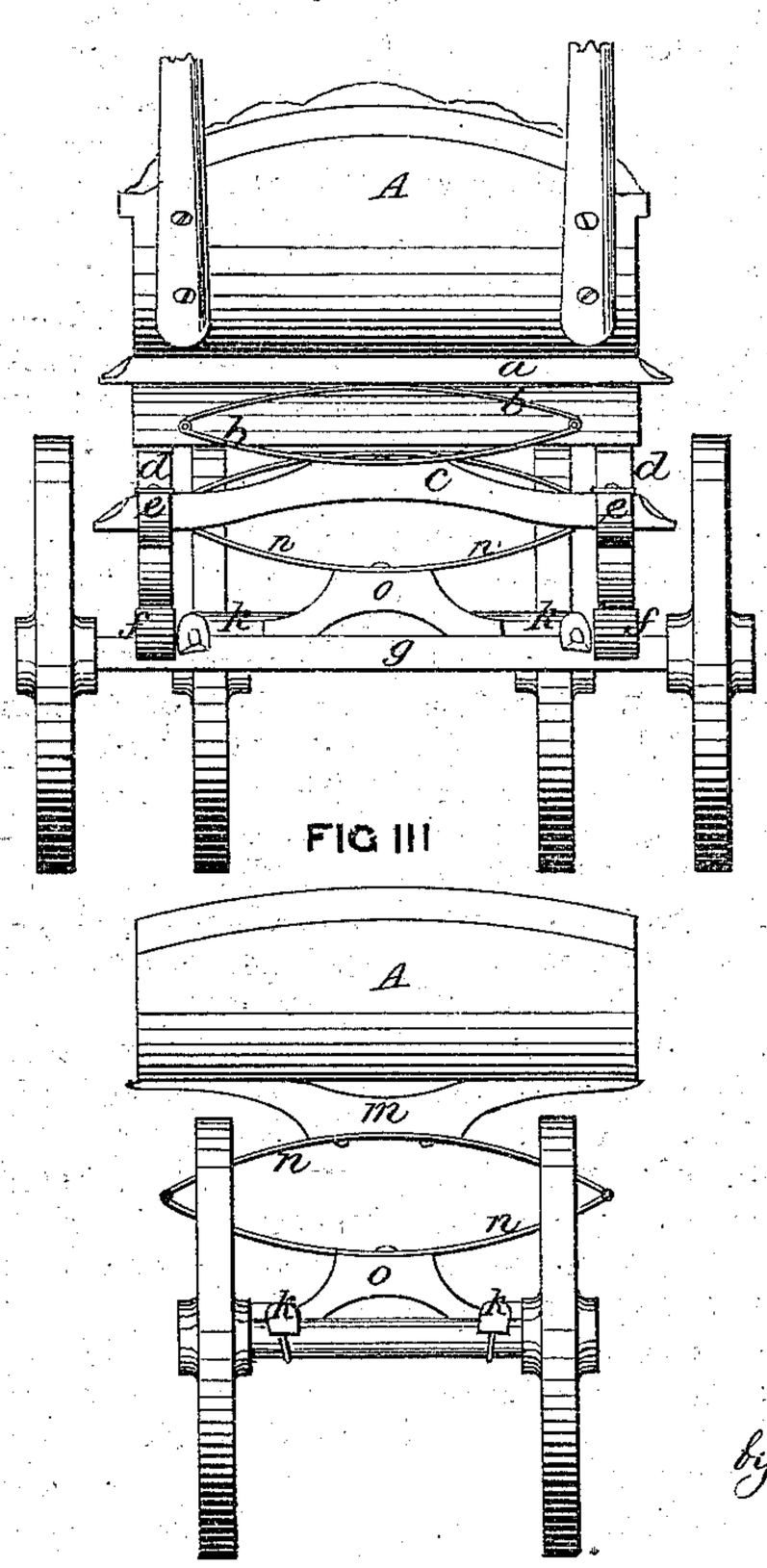

FIG III

WITNESSES

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UNITED STATES PATENT OFFICE.

JACOB A. CONOVER AND GUSTAVUS W. CONOVER, OF NEW YORK, N. Y.

IMPROVEMENT IN CHILDREN'S CARRIAGES.

Specification forming part of Letters Patent No. **154,458**, dated August 25, 1874; application filed July 29, 1874.

To all whom it may concern:

Be it known that we, JACOB A. CONOVER and GUSTAVUS W. CONOVER, of the city and State of New York, have invented a new and useful Improvement in Children's and other Carriages, a full, clear, and exact description whereof is contained in the following specification and accompanying drawings, with the letters of reference marked thereon.

The object of our invention is to give more elevation to the body of the carriage without increasing the size of the wheels, and rendering its movements, especially at the back part, more elastic and easy, and secure the several parts more firmly in their relative positions.

Figure 1 is a side view, representing a carriage with our improvement. Fig. 2 is the rear-end view. Fig. 3 is the front-end view.

A is the body, and represents in the drawing what is known in the trade as a cut-under body, and *i* represents the seat. About three-quarters of the distance back from the front line of the seat *i*, and directly over the hind axle, is secured to the under side of the body a cross-bar, *a*. Under this, at its center, is secured an elliptic spring, *b*, in a line parallel with the cross-bar *a*, as shown in Figs. 1 and 2. This spring is in like manner secured at its lower side to a spring cross-bar, *c*, which bar rests on and is secured at its respective ends to springs *e e*, one spring below each side of the body, and sets in a line with its longitudinal direction. These springs *e* are secured at their lower sides to spring-blocks *f f*, one of each of which is secured to the hind axle *g*, near the wheels, in the required position. *d d* are two springs, also running in a line parallel with the longitudinal direction of the body, and are secured at one end to the cross-bar *c*, at or near each end thereof, and the other end to the bottom of the body A, at any convenient and sufficient distance from the cross spring-bar *c* to insure their action, as both springs and braces at the same time, the last-named springs *d d* performing the double office of springs and braces, adding greatly to the gentle movement of the body, and securing it and the hind axle and springs in their desired relative positions to each other. *k k* are two reaches, running in a line with the longitudinal direction of the body. One end of each is secured to the hind axle, and they project forward and connect with the forward axle, to hold all the connecting parts in their proper place. At a proper and convenient place under the forward part of the body (to carry the same) is secured the cross-bar *m*, and under this, at its center, is secured the elliptic spring *n*, in a line parallel with the cross-bar *m*, as shown in Fig. 3. This spring is secured in like manner at its lower side to a cross spring-bar, O, which bar rests on and is secured at its respective ends to the reaches *k k*, or may be secured to the forward axle.

By reference to the drawing, it will be observed that the reaches *k k*, cross spring-bar O, spring *n*, and cross-bar *m*, or their equivalents, give about one-third less elasticity at the front of the body as compared with the back; and while we prefer to construct them in about the shape shown in the drawings, we do not limit ourselves to any such forms, as they may be varied in this respect to any extent which will not interfere with the purposes described.

By constructing these spring-braces *d d* of a proper curvature and strength the spring *b* may be omitted and the body still be elevated substantially as described.

We claim as our invention—

1. The cross-spring *b*, cross-spring bar *c*, and the parallel springs *è e*, in combination with the springs *d d*, substantially as described.

2. The springs *d d*, combined with the body A and the springs *e e* to act as braces and springs, substantially as and for the purposes described.

3. The cross-spring *b*, cross-spring bar *c*, parallel springs *e e*, and coupling-springs *d d*, to carry the back part of the body, in combination with a reach or reaches *k k* and the spring *n*, to carry the front part of the body, substantially as and for the purposes described.

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Witnesses:
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