

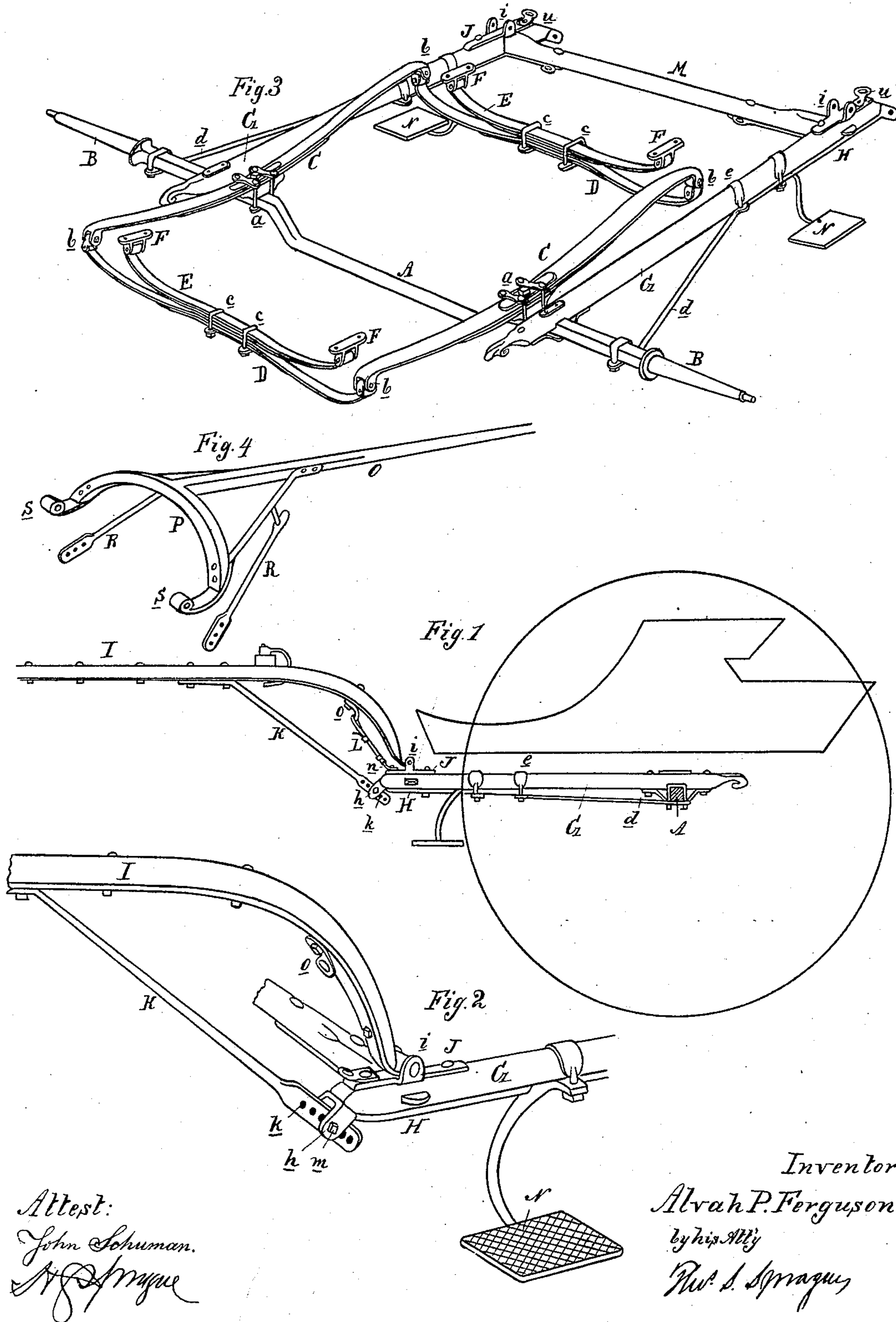
(No Model.)

A. P. FERGUSON.

ROAD CART.

No. 326,414.

Patented Sept. 15, 1885.



Attest:
John Schuman.
[Signature]

Inventor:
Alvah P. Ferguson.
by his Atty
Thos. S. Sprague

UNITED STATES PATENT OFFICE.

ALVAH P. FERGUSON, OF DEXTER, MICHIGAN.

ROAD-CART.

SPECIFICATION forming part of Letters Patent No. 326,414, dated September 15, 1885.

Application filed July 23, 1885. (No model.)

To all whom it may concern:

Be it known that I, ALVAH P. FERGUSON, of Dexter, in the county of Washtenaw and State of Michigan, have invented new and useful Improvements in Road-Carts; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to certain new and useful improvements in the construction of two-wheeled vehicles, or, as they are sometimes termed, "spring-carts."

Formerly the bodies of carts rested directly upon the axle, and the device was so constructed that every movement of the horse was communicated to the rider, thereby producing an unpleasant jerky motion. I am aware that a number of inventions have been made to remedy this annoyance and to render such vehicles as easy in their motion to the rider as that of a carriage. This invention, therefore, consists in an improvement in the method of constructing and attaching the springs to the axle and body, so that no "horse-motion" is communicated to the rider, and also in the construction and combination of certain appliances by means of which the vehicle is adjusted and adapted to be drawn by shorter or taller horses without interfering with the plane of the body; and it also consists in the peculiar construction of parts and their combination in a two-wheeled vehicle, as more fully herein-after described.

Figure 1 is a side elevation being partially in section. Fig. 2 is an enlarged perspective view of the connection between the side bar of the vehicle and its shafts. Fig. 3 is a perspective of the running-gear of such vehicle with the wheels removed. Fig. 4 is a perspective showing the tongue and its connections with the side bar to adapt the vehicle to be drawn by two horses.

In the drawings, A represents the axle, which is made of iron or steel, as may be preferred, provided with the usual arm, B, upon which the wheels run. The axle should be rectangular in form at the points where the clips *a* are employed to secure the side springs, C, to such axle. These side springs are made in the usual way of

making half-elliptic springs generally; but the thickest part of the spring, instead of being in the longitudinal center, is placed near the rear end of such springs, as shown in Fig. 3, in order to give a greater elasticity to the longer part, which projects in front of the axle. These side springs, C, terminate in hangers *b* at each end, and to these hangers are pivotally connected the end springs, D, constructed in the form shown in Fig. 3. So far this description is that of a platform-spring of the usual construction, wherein there are two side and two end springs. I make an addition to this platform, consisting of the two springs E, which are shorter than the end springs, D, and are secured thereto by means of clips *c*. The ends of these springs E turn upwardly, and are pivotally secured to metallic strips F, upon which the side sills of the vehicle-body rest and are secured.

It will readily be seen that by this construction that portion of the platform above which the rear portion of the vehicle-body rests (which contains the seat) is immediately over the axle and projects to the rear thereof upon the stiffer portion of the platform, while the lighter and front portion of the body projects more in front of the axle and rests upon the more elastic portion of the spring, thereby securing a more perfect balance upon the axle when the vehicle is occupied than can be had where the springs are longitudinally centrally clipped or secured to the axle.

G are side bars, the rear ends of which are clipped upon the axle, as shown in Figs. 1 and 3, and project forward of the same a sufficient distance to clear the vehicle-body. To secure the parts more rigidly together, and to counteract any tendency to side draft, I employ the diagonal braces *d*, secured below the axle by the clip-bolts, their forward ends being secured by clips *e* to the side bars. To the underside of the forward ends of these side bars there are secured the plates H, the forward ends of which terminate in downwardly-hanging ears *h*.

I are the shafts of the vehicle bent downwardly at their rear ends, as shown in Figs. 1 and 2, while the rear ends of such braces have a series of perforations, *k*, and pass between the

ears *h*, and bolts *m* are employed to secure these parts together and provide means for the adjustability required. The pivotal point at which the shafts are connected with the side bars is so near this adjustable point that it allows the brace *K* to be rigidly secured to the shafts. An eye plate, *n*, is secured to the front end of the plate *J*, and a similar eye-plate is secured to the shafts, and between these two eye-plates is an adjustable strap, *L*, which may be termed a "safety-strap," as in case of accident or breakage of the other connecting parts between the shafts and side bars these straps would prevent disaster.

M is a spreader-bar which holds the forward ends of the side bars in place, and *N* are steps secured to the side bars by means of clips or in any other convenient manner.

In Fig. 4 *O* represents the pole, terminating in the usual arched yoke, *P*, having clip-irons *s*, which may be employed in place of the shafts, such clip-irons *s* engaging with the clip-irons *i* of the device.

R are the adjusting-braces which take the place of the adjusting-braces *K*, already described, so that it will be seen that the device may be converted from a one to a two horse

vehicle with the same ease as is done with vehicles of ordinary construction.

What I claim as my invention is—

1. In a two-wheeled vehicle, and in combination with the axle and body thereof, a spring-platform consisting of two side springs, two end springs supported pendent from the ends of such side springs, and two supplemental end springs clipped to and supported by such end springs, and supporting the body, the parts being constructed and operating substantially as and for the purposes described.

2. In a two-wheeled vehicle, and in combination with the axle and body thereof, a spring-platform consisting of the two side springs, *C C*, two end springs, *D D*, supported pendent from the ends of such side springs, the two supplemental end springs, *E E*, clipped to and supported by the springs *D*, and the metallic strips, *F*, pivotally secured to the ends of the springs *E*, and adapted to be secured to and support the body, as set forth.

ALVAH P. FERGUSON.

Witnesses:

A. LATHROP,
A. D. CRANE.