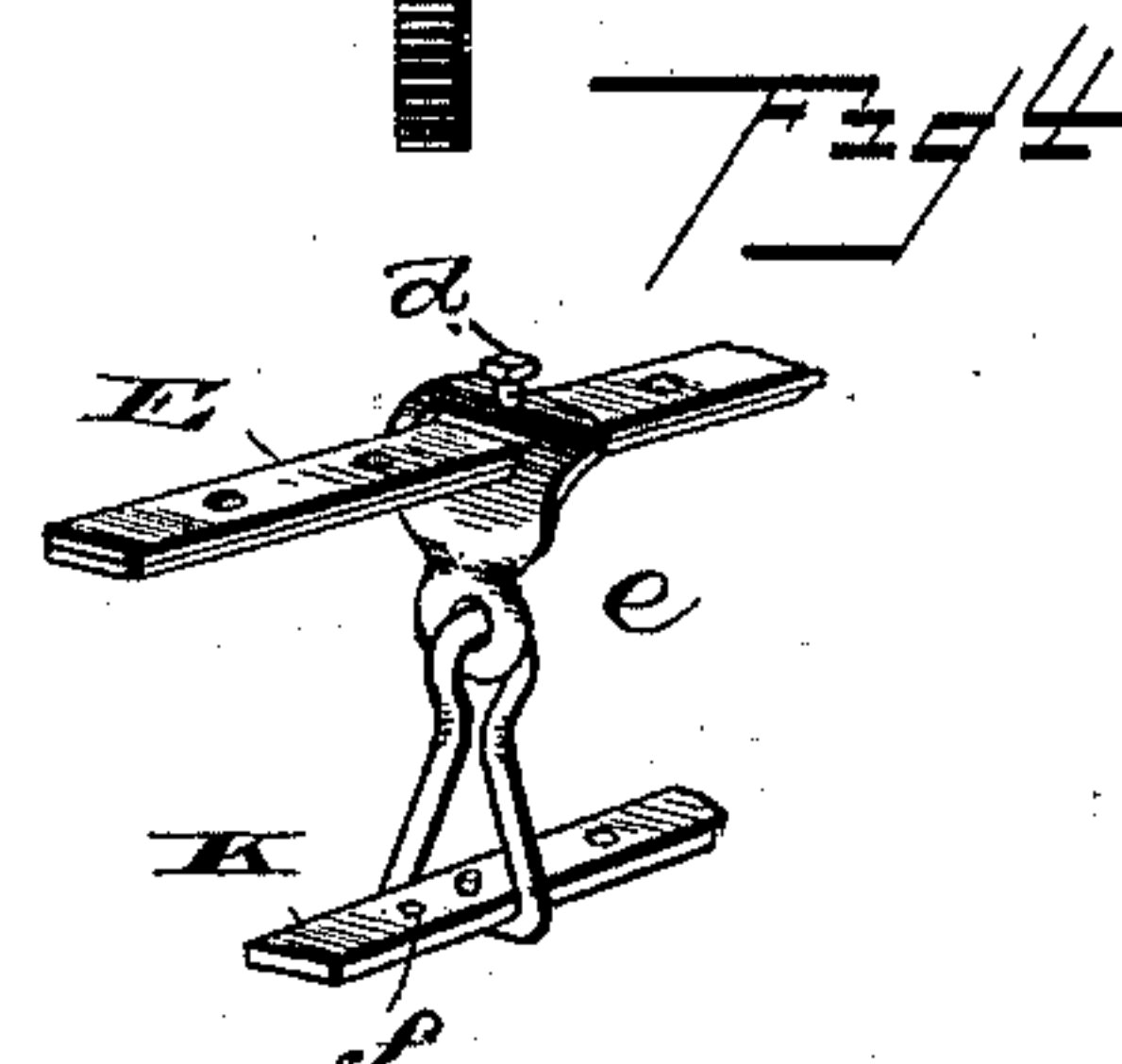
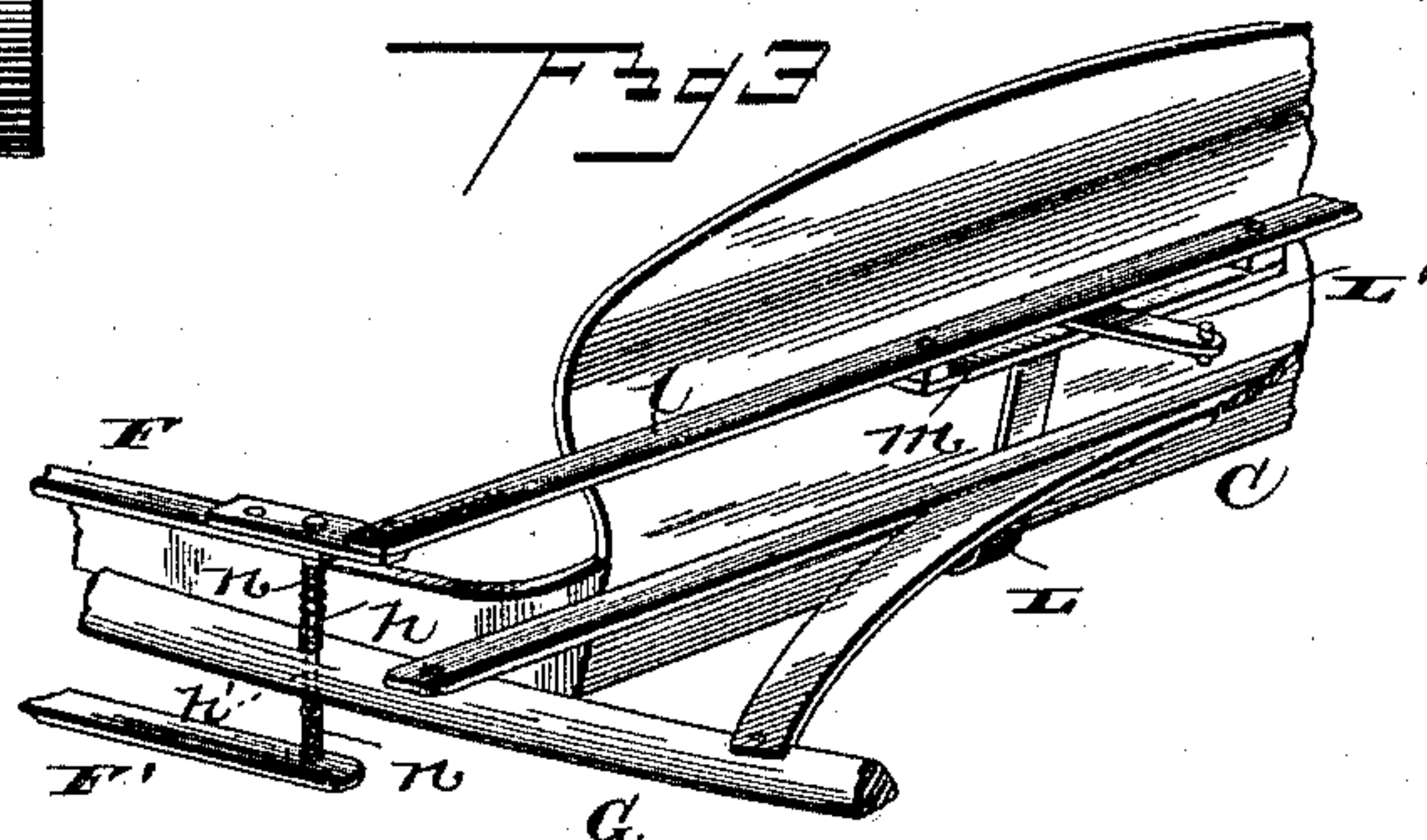
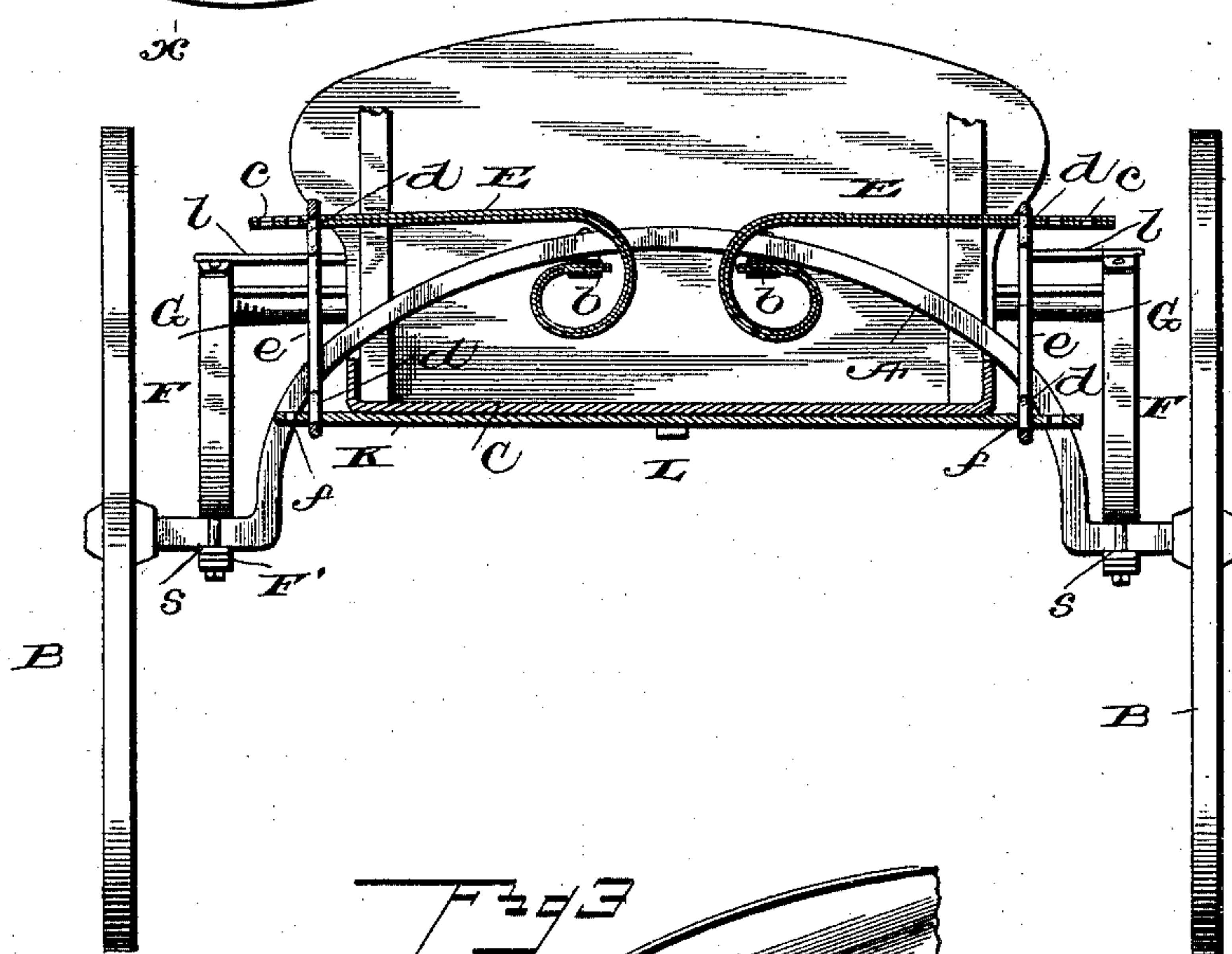
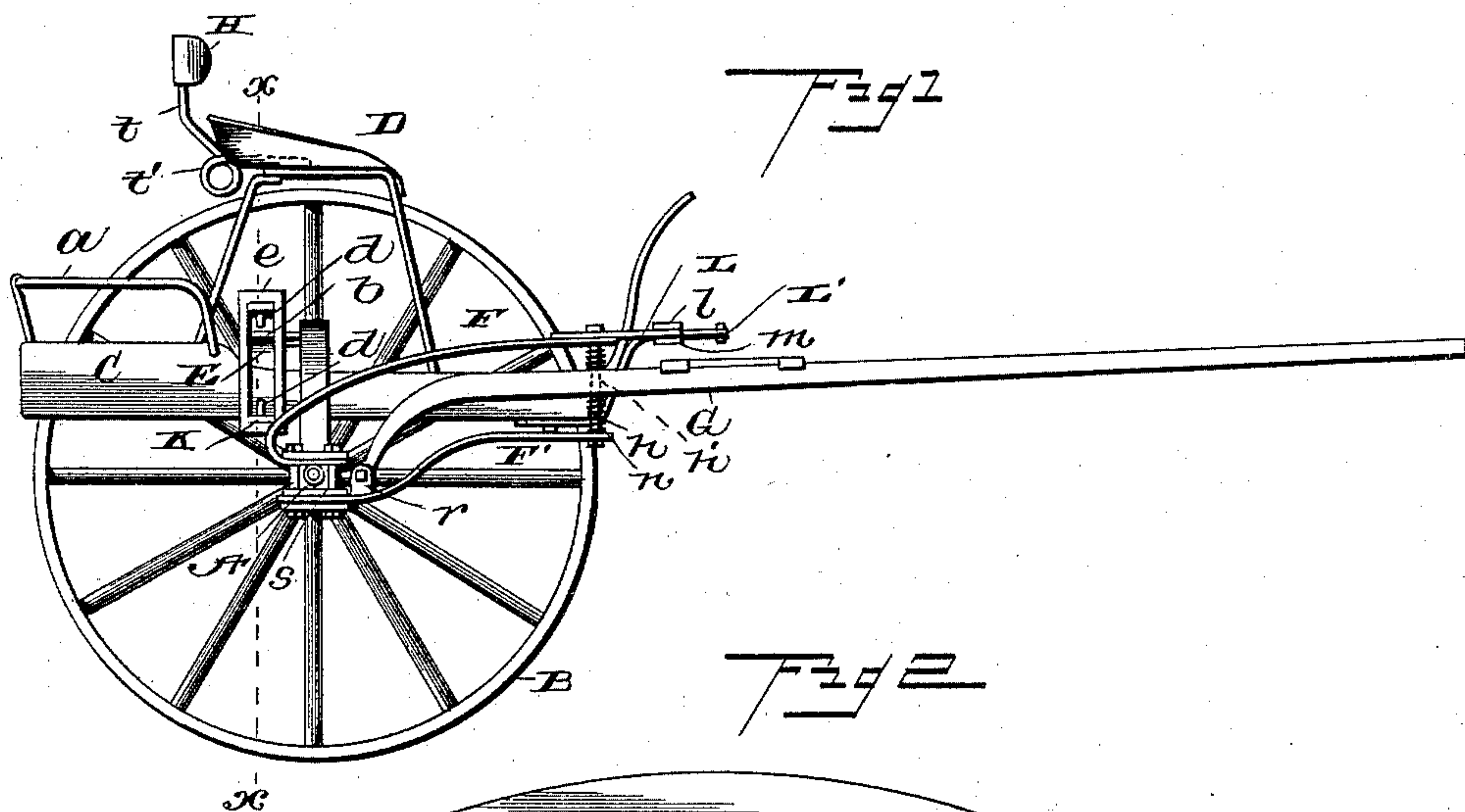


(No Model.)

J. G. TRUMP.
VEHICLE.

No. 477,475.

Patented June 21, 1892.



Witnesses

Inventor

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By his Attorneys

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UNITED STATES PATENT OFFICE.

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VEHICLE.

SPECIFICATION forming part of Letters Patent No. 477,475, dated June 21, 1892.

Application filed October 20, 1891. Serial No. 409,305. (No model.)

To all whom it may concern:

Be it known that I, JOHN G. TRUMP, a citizen of the United States, residing at Richville, in the county of Tuscola and State of Michigan, have invented certain new and useful Improvements in Vehicles, of which the following is a full and clear description, reference being had to the accompanying drawings, forming part of this specification, in which—
Figure 1 represents a side elevation of a two-wheeled vehicle embodying my invention and showing one of the wheels removed. Fig. 2 is a cross-sectional view of the same on the line X X of Fig. 1. Fig. 3 is a perspective view showing a portion of the front of the body and the guide-bar connecting the side spring-plates. Fig. 4 is a modified form of hanger.

My invention relates to the general class of vehicles, and especially to the class of two-wheeled vehicles known as "road-carts." It is an improvement on my former patent, No. 433,833, dated August 5, 1890; and it consists in the constructions and combinations of devices, which I shall hereinafter fully describe and claim.

In the accompanying drawings, A represents the main axle, upon the opposite ends of which the wheels B are mounted and adapted to rotate, and C is the body of the vehicle, having a seat portion D supported thereon in any suitable manner, the said body having a railing *a* surrounding its rear portion. The axle or shaft A is arched at its central portion, extends across the vehicle between the seat and bottom of the body portion, and has secured to it near the central portion thereof suitable bearings or lugs *b*, adapted to have fitted to them one end of the springs E. These springs are preferably thin flat plates, and after being secured to the lugs are coiled and their opposite ends extended in reverse directions and project beyond the sides of the body, and their extended portions are formed with holes *c*, which are designed to be engaged by yokes *e*, which connect the free ends

of the springs with the body of the vehicle, and thereby suspend the body portion directly from the springs.

Securely fastened to the bottom of the body portion in line with the spring E and with its ends projecting beyond the sides of the body and provided with holes *f* is a plate K, to which the yokes suspended from the ends of the springs E are attached. These yokes or hangers are slotted or have open centers, and from their end walls project inwardly the integral pins or lugs or set-screw *d*, adapted to engage the holes in the ends of the springs E and plate K, so that the yokes may be adjusted inward or outward to regulate the tension of the springs with respect to the weight being carried.

From this description it will be seen that the weight of the body of the vehicle and of the occupant is transmitted through the yokes or hangers to the free ends of the springs, which ends are pulled down against the resistance of the coils at their inner ends. This construction permits a free vertical movement, but prevents the disagreeable lateral or side motion due to the movement of the horse from being communicated to the body and seat of the vehicle.

Suitable spring-plates F and F', having their inner ends clipped to the axle, extend forward one above and one below each shaft or thill G and have their forward ends joined by rods *h*, which pass through holes *h'* in the shafts, while the front end of the upper plate F is connected to a cross-bar *l* in front of the body portion. This cross-bar has a slotted portion or guide *m* at its center, and to the forward part of the body portion is secured an angular plate L, whose upper horizontal arm L' is adapted to pass loosely through the slotted portion or guide *m* on the cross-bar *l*, and thereby prevent a jerking side motion in the event of the wheels striking an obstruction or depression in the road. Around the rods *h*, above and below the shafts or thills, are coiled springs *n*, which serve as cushions and as a means for

holding the front of the body in its proper position, and also allowing for the up-and-down or vibrating movement of said front. The inner ends of the shafts or thills are pivotally held between lugs *r* on the forward ends of plates *s*, which lie between the inner ends of the spring-plates and the bottom of the axle and are held in place by the clips before mentioned as securing the plates *F* and *F'* to the axle, as in my former patent.

To provide as much comfort as possible for the occupant of the vehicle, I construct the seat with a lazy-back *H*, which is secured to the standards *t*, that are coiled at *t'* just under the back of the seat and have their opposite or lower ends secured to the under surface of the seat in any suitable manner.

A vehicle constructed as above described overcomes the horse motion of the common road-cart. It permits the cart to ride easier over rough roads or obstructions, as the box or body of the vehicle is permitted to yield, so that when the wheels are passing over an obstruction or irregularity in the road the box or body remains level, thereby saving the driver or persons riding in the cart the disagreeable jolting common to many of the carts now in use.

While I have described my invention as being adapted to road-carts, I do not limit it to such carts, as the same constructions may be used on four-wheeled vehicles, with or without a box, like the one shown.

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

1. In a road-cart or other vehicle, the body

portion thereof suspended from the main axle, in combination with springs secured to the axle near its center and projecting outwardly beyond the sides of the body and yokes or hangers connecting the free ends of the springs with the body, substantially as herein described.

2. In a road-cart or other vehicle, the main axle and the body, in combination with springs secured at one end near the center of the axle and then coiled and extended outwardly beyond the sides of the body and having the extended portions formed with holes, a plate on the bottom of the body, with its ends extending beyond the sides of the same and provided with holes, and yokes or hangers slotted to receive the projected ends of the springs and plate and provided with pins or lugs or set-screw adapted to engage the holes in said springs and plate, whereby the body is suspended from the springs and the tension of the latter regulated, substantially as herein described.

3. In a road-cart or other vehicle, the body, the main axle, the thills, the bearing-wheels, and the spring-plates *F F'*, in combination with a plate in front of the body, connecting the forward ends of the spring-plates *F* and provided with a slotted guide, and an angular plate on the body, having its upper horizontal arm working loosely in said guide, substantially as herein described.

JOHN G. TRUMP.

Witnesses:

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