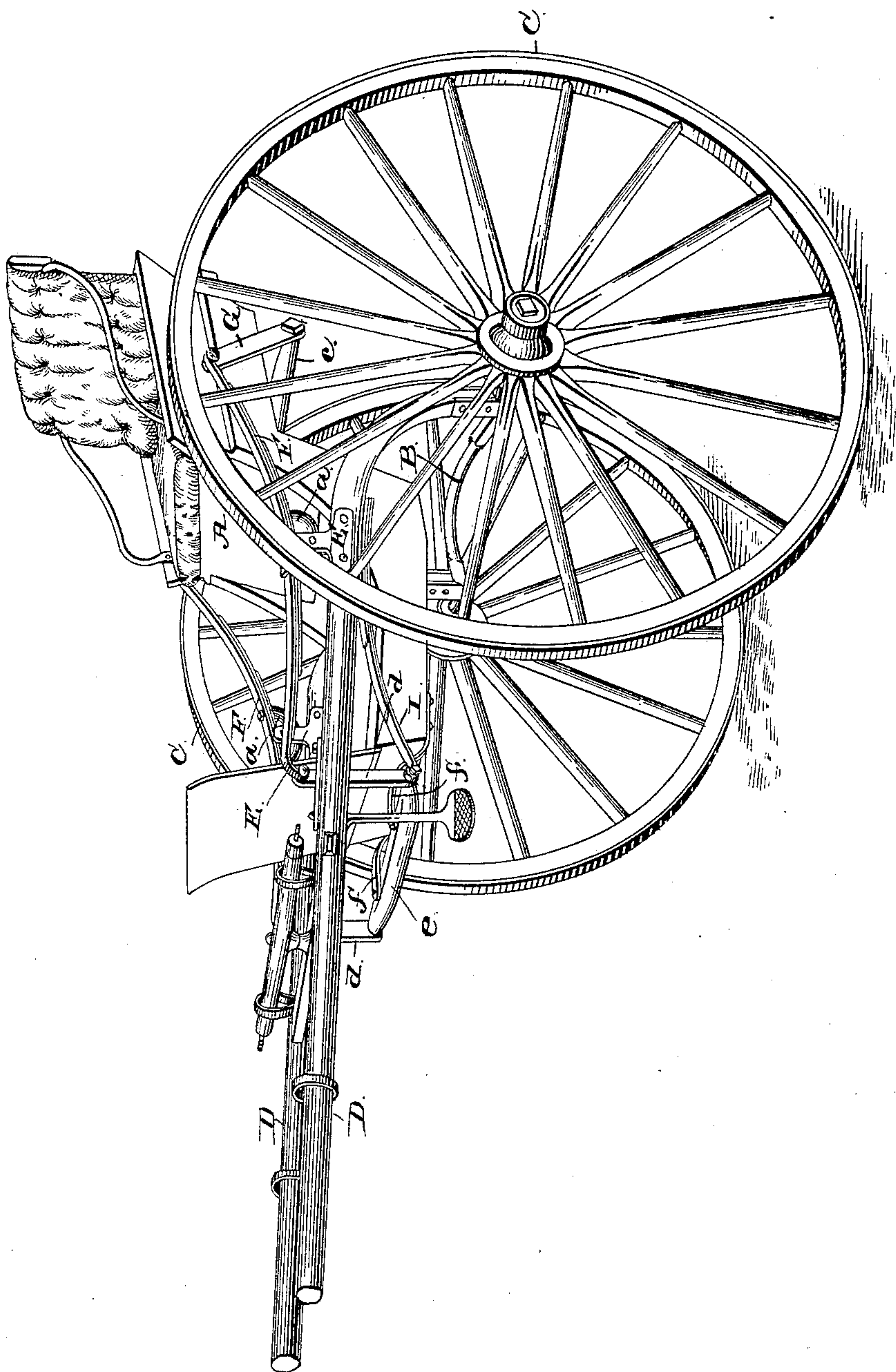


(No Model.)

T. N. GAHAGEN.
TWO WHEELED VEHICLE.

No. 318,557.

Patented May 26, 1885.



Witnesses
Abraham Lusher
Lee Thompson

Inventor.
Thomas Newton Gahagen
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UNITED STATES PATENT OFFICE.

THOMAS NEWTON GAHAGEN, OF TEMPLETON, PENNSYLVANIA.

TWO-WHEELED VEHICLE.

SPECIFICATION forming part of Letters Patent No. 318,557, dated May 26, 1885.

Application filed January 12, 1885. (No model.)

To all whom it may concern:

Be it known that I, THOMAS NEWTON GAHAGEN, a citizen of the United States, residing at Templeton, in the county of Armstrong and State of Pennsylvania, have invented a
5 Double-Acting Spring for Road - Carts; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art
10 to which it appertains to make and use the same.

My invention relates to double - acting springs, designed more especially for use on what are known as "road-carts," the object being to provide springs of the character mentioned which shall be cheap and simple in
15 construction, strong, and durable, and to provide springs which will, as far as possible, prevent all motion from the horse.

20 With these ends in view the invention consists in the improved construction and combination of parts hereinafter fully described, and pointed out in the claims.

The single figure represents a perspective
25 view of a road-cart embodying my invention.

Referring by letter to the accompanying drawing, A represents the body of a road-cart; B, the axle; C, the carrying-wheels, and D the shafts.

30 Secured upon the upper sides of the shafts D, a short distance from their point of connection with the axle B, are upwardly - extending plates E, provided with holes or openings.

35 F represents leaf-springs, secured to the under side of which, in any suitable manner, are downwardly - extending segmental plates *a*, provided with holes or openings for the passage of bolts, whereby they are pivoted between the upwardly-extending plates E. The
40 rear ends of the leaf-springs F curve upwardly, and pivoted to the rear ends of said springs are downwardly-extending plates G, the lower ends of which are pivotally connected to a
45 bar, *c*, extending under the body of the cart.

Pivotally connected with the forward ends of the leaf-springs F, which turn downwardly, are depending plates *d*, and connecting said plates is a bar, *e*. The forward end of the
50 body of the cart is supported by straps *f*, se-

cured to the under side of the body at one end and to the bar *e* at their other ends.

I represents leaf-springs, which are secured to the under sides of the shafts just below the plates E. The outer or front ends of the
55 springs I are pivotally connected with the downwardly-extending plates *d*.

It will be observed that as the connections between the body and axle are all pivotal the said body will be allowed a rocking movement. It will also be observed that by constructing the plates *a* segmental the springs F are allowed a rocking movement, which could not be obtained were the plates angular.

When weight is thrown upon the rear ends
65 of the springs F, it will be clearly apparent that the leaf-springs I will be subjected to strain through the plates connecting the outer ends of said springs F and G.

The springs before described are simple in
70 their construction, readily and easily affixed, and thoroughly effective in operation.

I claim—

1. In a two-wheeled vehicle, the combination, with the shafts, of springs pivoted upon
75 the upper sides thereof, downwardly-extending plates pivoted to the rear ends of said springs and connected by a cross-bar, and intermediate connections between the forward end of the body and the springs, and means,
80 substantially as described, for supporting the body in its proper relative position, as set forth.

2. In a two-wheeled vehicle, the combination, with the shafts, of springs pivoted upon
85 the upper sides of said shafts, depending plates pivoted to the ends of said springs, bars connecting said plates, and straps connecting one of said bars with the body, and means, substantially as described, for supporting the
90 body in its proper relative position, as set forth.

3. The combination, with the shafts, of springs pivoted upon the upper sides thereof and connected at their rear ends, springs arranged upon the under sides of the shafts and connected with the springs F at their forward ends, means, substantially as described, for limiting the downward movement of the rear end of the body, and intermediate connec-
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tions between the forward ends of the springs and the body, substantially as set forth.

4. The combination, with the shafts, of springs pivoted upon the upper sides thereof, depending plates at the rear ends of said
5 springs, a bar connecting said plates, depending plate at the forward end of said springs, a bar connecting the same, straps connecting

said bar and the body, and springs secured to the under side of the shafts, and pivotally connected with said bar, substantially as set forth.

THOMAS NEWTON GAHAGEN.

Witnesses:

ABRAHAM LASHER,
LEE THOMPSON.