

(No Model.)

G. W. SAUNDERS.
TWO WHEELED VEHICLE.

No. 390,313.

Patented Oct. 2, 1888.

Fig 1.

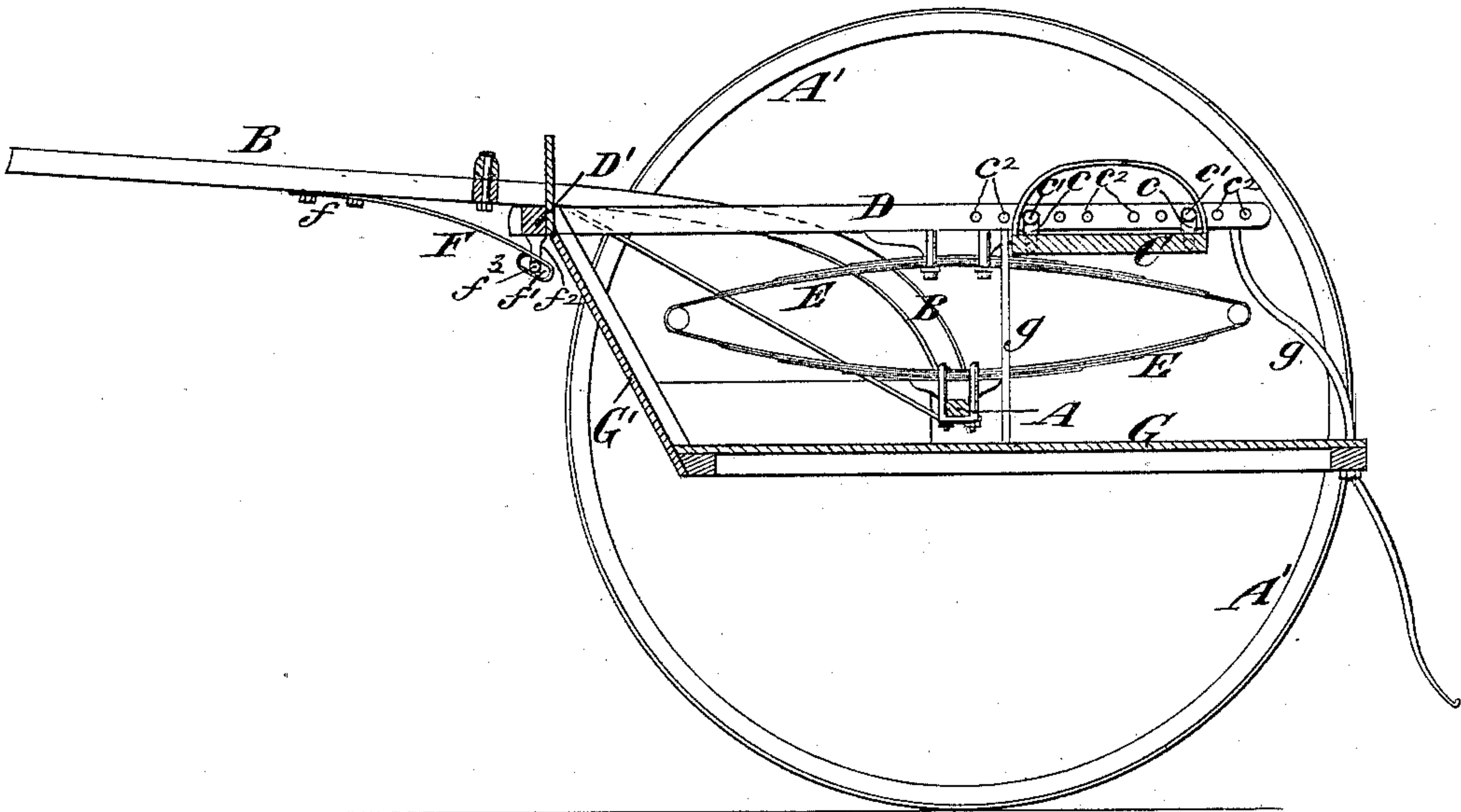
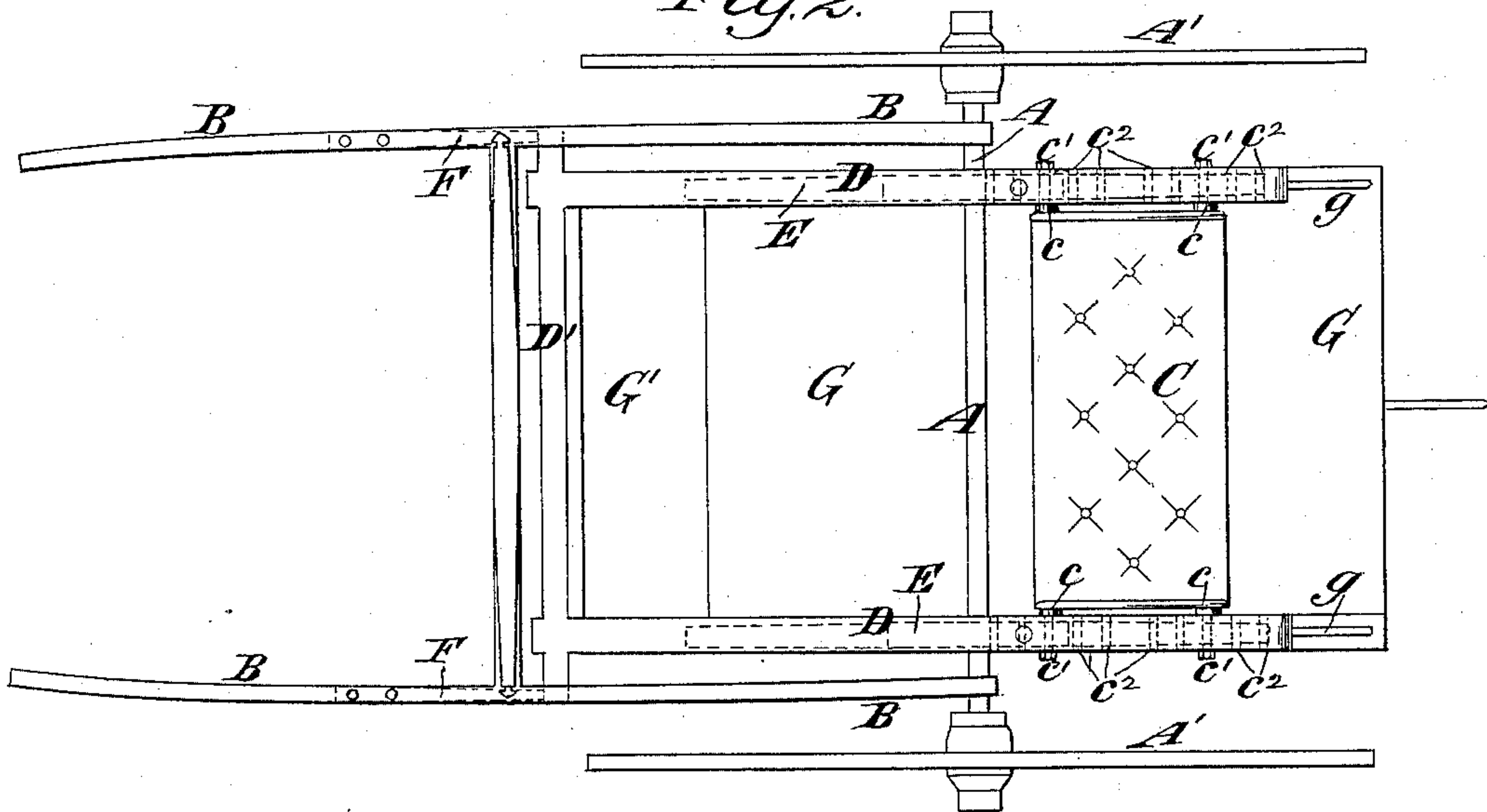


Fig 2.



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UNITED STATES PATENT OFFICE.

GEORGE W. SAUNDERS, OF NEW YORK, N. Y.

TWO-WHEELED VEHICLE.

SPECIFICATION forming part of Letters Patent No. 390,313, dated October 2, 1888.

Application filed November 25, 1887. Serial No. 256,083 (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. SAUNDERS, of the city and county of New York, in the State of New York, have invented a new and useful Improvement in Two-Wheeled Vehicles, of which the following is a specification.

My improved vehicle is particularly useful in breaking or training horses; and important objects of my invention are to bring the weight of the vehicle and rider low down, so that the vehicle cannot be easily overturned, and also to afford provision for readily mounting the vehicle from behind the axle.

The invention will be hereinafter particularly described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a sectional elevation of the vehicle in a plane transverse to the axle, and Fig. 2 is a plan of the vehicle.

Similar letters of reference designate corresponding parts in both figures.

A designates the axle, and A' the wheels, of which I have only shown the outline in Fig. 1.

B designates the shafts, which are continued rearward to and are directly connected with the axle A.

C designates the seat, which is supported from an upper or seat-supporting frame. This frame is, as here represented, composed of substantially parallel side bars or portions, D, below which are springs E, (shown as elliptical in form,) whereby the said frame is supported from the axle, and a front bar, D', connecting said side bars or portions, D. The said side bars or portions, D, are, however, unconnected at their rear, so that a person may readily mount the vehicle from the rear, as hereinafter described.

In addition to the support which the upper frame, D D', receives from the springs E, its front end is connected with the shafts B by means of compensating springs F. (Here shown as secured at one end, f, one to each shaft, and having a free connection, f', at the opposite end, with a hanger or shackle upon the side bar, D, of the frame.) The compensating springs have, as here represented at f'', a loop receiving a laterally-projecting pin or stud, f³, on the hanger or shackle f², which is upon the frame, and this connection, while providing for the support of the front end of the frame in a measure from the shafts, permits the ver-

tical movement of the frame relatively to the shafts. The vehicle is also provided with a floor or foot platform, G, which extends below the axle A, and is supported from the frame D D' by hangers g, as shown in Fig. 1. This floor or platform G is also closed at the front by a board or front piece, G', extending upward to the front bar, D', of the upper frame; but this may be omitted. It will be seen that inasmuch as the floor or platform G is arranged low down and below the axle the weight of the rider is brought low and the vehicle becomes very stable and not easily overturned. The floor or platform G below the axle and the leaving of the side bars or frame portions, D, unconnected at their rear ends also provide for mounting the vehicle very readily from the rear, which is an advantage in breaking or training colts.

The seat C is not rigidly supported upon the spring-supported frame D D', as is usual, but has a swinging connection with the side bars or portions, D, of said frame. The seat is supported by shackles or links c, pivotally connected with the seat at their lower ends, and also pivotally connected with the side bars, D, of the seat-supporting frame at their upper ends. In this example of my invention the upper ends of the shackles or links c are hung upon bolts c', and the side bars, D, of the upper frame have each a number of holes, c², bored transversely into them at different points in their length, into any of which the bolts c' may be inserted. This provides for adjusting the seat forward or back, so as to properly balance the vehicle to suit riders of different weights, and the hanging of the seat upon swinging links or shackles compensates for any jerky movement which the vehicle may receive in traveling and takes the strain off the rider's back.

In two-wheeled vehicles or sulkies as heretofore usually constructed the shafts are extended rearward and are supported upon elliptical or other springs from the axle, and such rearward extension of the shafts forms a seat-supporting frame. In my vehicle the construction is different from that just described as old, in that the shafts are connected directly with the axle, and the seat-supporting frame, which is formed by the bars D, is independent of and made separate from the shafts. My ve-

hicle is also peculiar in having, in combination with the shafts connected directly with the axle and the seat-supporting frame independent of the shafts and supported from the axle by the springs E, the compensating springs F, which form an elastic or yielding connection between the shafts and the front end of the seat-supporting frame D.

I am also aware that in two-wheeled vehicles the seat has in some cases been pivoted at opposite ends, so as to tilt or rock backward and forward, constantly changing its angle meanwhile. In my vehicle the seat is hung by hangers, on which it may swing backward and forward without tilting, and whereby the seat, notwithstanding its swinging movement to and fro, will retain its horizontal position. The means of supporting my seat are therefore essentially different from the pivoted bracket or support which is employed to sustain the seat in the vehicle shown in Patent No. 250,275, granted November 29, 1881, to S. W. Metcalf.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a two-wheeled vehicle, the combination, with an axle, of a frame, springs supporting said frame above the axle, shafts having a spring-connection with said frame and connected directly to the axle, a seat, and swinging shackles or links, whereby the seat is suspended from said frame, said shackles or links being adjustably hung upon the frame, substantially as specified.

2. In a two-wheeled vehicle, the combination, with an axle, of shafts connected directly thereto, a seat-supporting frame independent of the shafts, elliptical springs supporting said frame above the axle, and the independent compensating springs F, connected at one of their ends to the front end of said frame and connected at their other ends to the shafts forward of and independently of said frame, substantially as specified.

3. The combination, with the axle of a two-wheeled vehicle, and shafts connected directly with the axle, of a seat-supporting frame independent of the shafts and supported by springs on the axle, and a floor or platform extending beneath the axle and suspended in front and in rear of the axle from said seat-supporting frame, substantially as herein described.

4. The combination, with the axle of a two-wheeled vehicle, and the shafts connected directly with the axle, of a floor or platform extending beneath the axle, and a seat-supporting frame independent of the shafts and supported by springs on the axle, and from which the floor or platform is hung, the said frame being composed of side bars connected by a front bar, and being left open at the back, so as to provide for mounting the vehicle from behind, substantially as herein described.

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