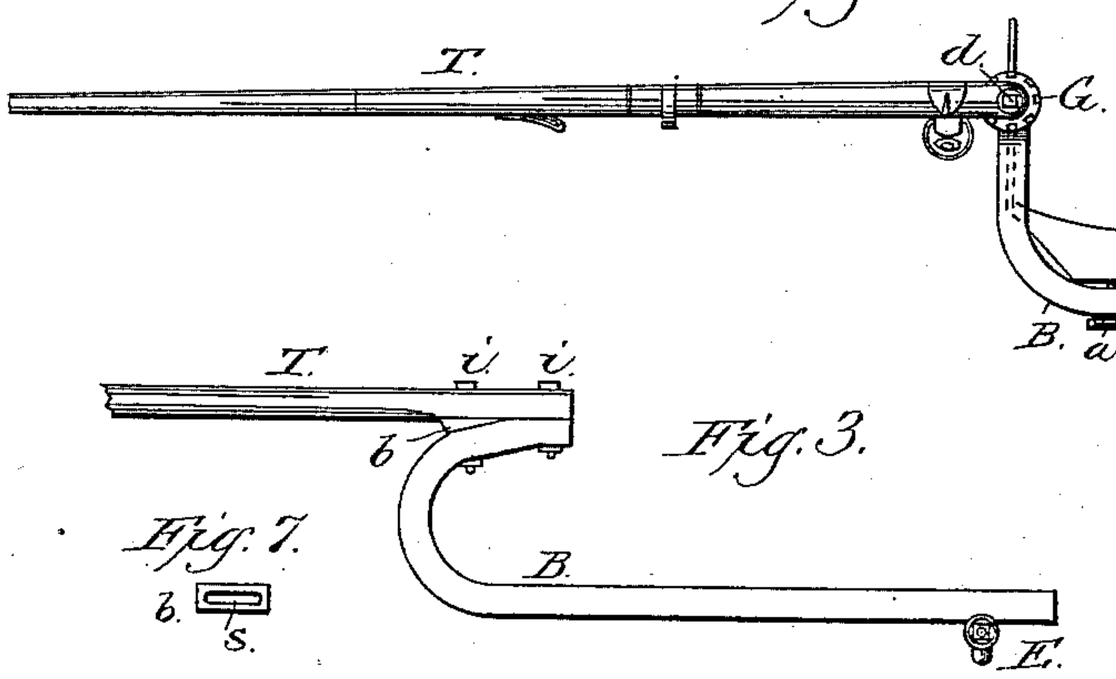
(No Model.)

J. A. CHAPMAN.

TWO WHEELED VEHICLE.

No. 277,409. Patented May 8, 1883.

Fig. 1.



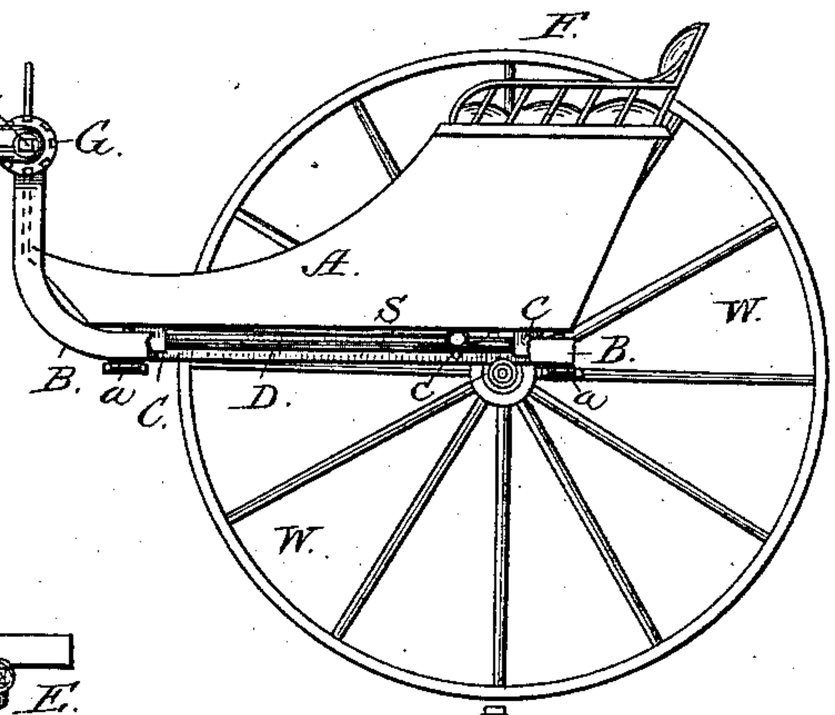


Fig. 3.

Fig. 7.

Fig. 2.

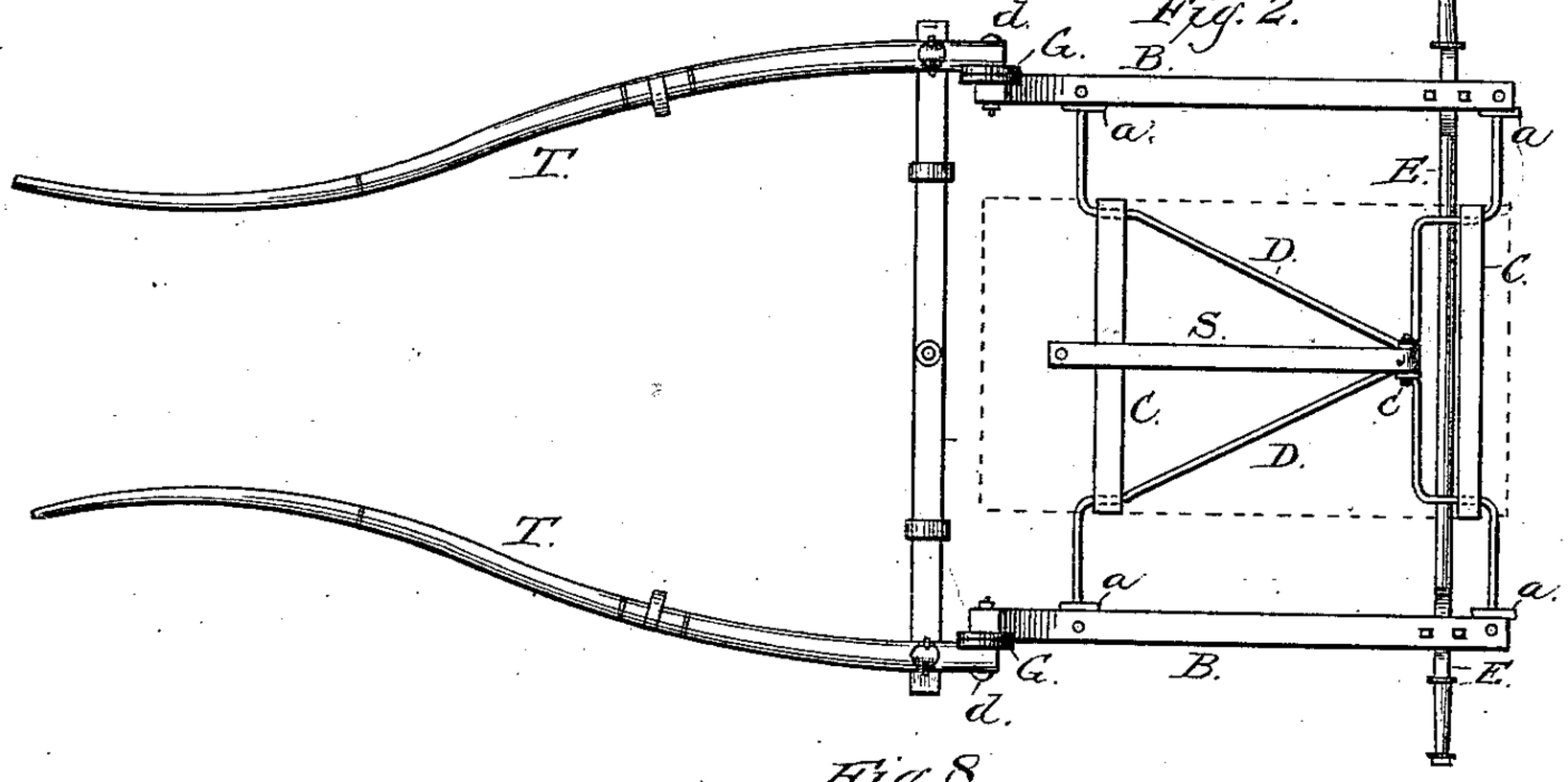


Fig. 8.

Fig. 4.

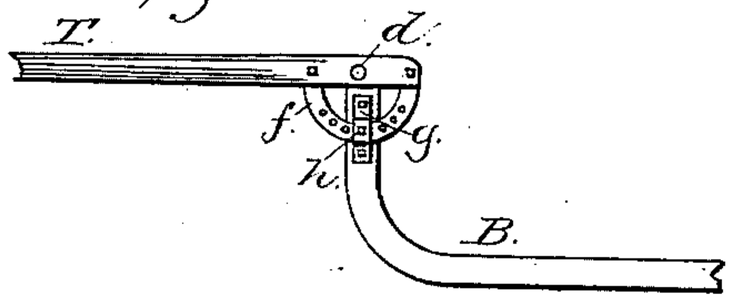


Fig. 5.

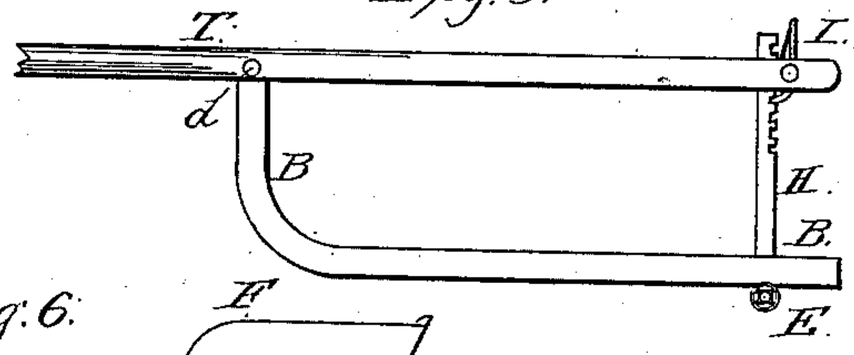
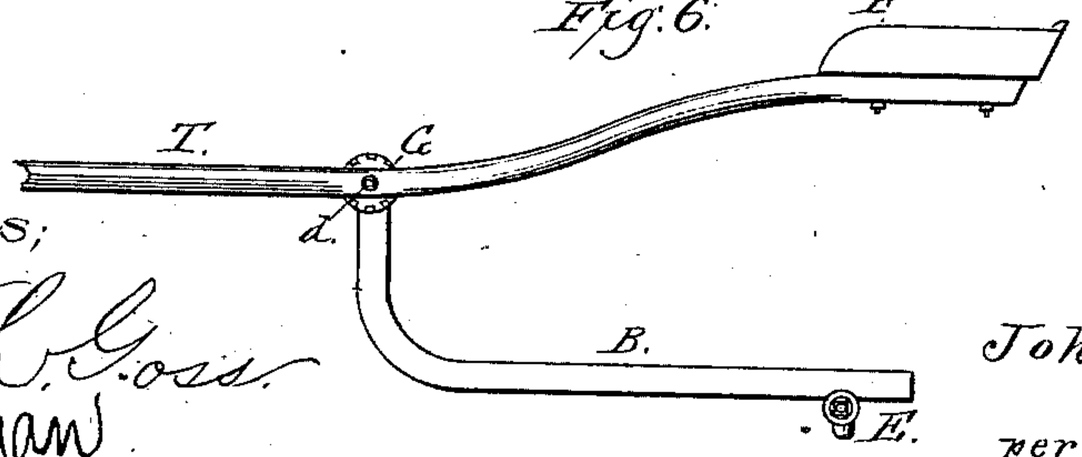


Fig. 6.



Witnesses;

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UNITED STATES PATENT OFFICE.

JOHN A. CHAPMAN, OF MILWAUKEE, WISCONSIN, ASSIGNOR TO THE NORTH-WESTERN SLEIGH COMPANY, OF SAME PLACE.

TWO-WHEELED VEHICLE.

SPECIFICATION forming part of Letters Patent No. 277,409, dated May 8, 1883.

Application filed August 2, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. CHAPMAN, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Two-Wheeled Vehicles; 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 to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in two-wheeled vehicles; and it consists, essentially, in the peculiar construction and arrangement of the parts sustaining the body and seat, and also in a novel device for connecting the shafts therewith; and the objects of my improvements are, first, by the use of a single spring and equalizing-rods or bails, to so distribute the weight applied to the vehicle as to equalize the vertical motion of the body; second, to afford an adjustable attachment for the shafts, by means of which the proper pitch or inclination of the body may be preserved when horses of different heights are used; and, third, to leave an open space for getting into and out of the vehicle in front of the wheels.

In the accompanying drawings like letters refer to similar parts thoughout the several views.

Figure 1 is a side elevation of my improved vehicle with a portion of the front rave cut away and the front wheel removed to show more clearly the parts sustaining the body. Fig. 2 is a plan view of the same with the wheels and body removed. Figs. 3, 4, 5, and 6 illustrate different ways of applying my improved method of adjustably attaching the shafts. Fig. 7 is a plan view of the wedge *b*, employed in the device shown in Fig. 3; and Fig. 8 is a view of the clevis *c*, encircling the bails or equalizing-rods D D.

A is the body of the vehicle, supporting the seat F.

E is the axle, and W is one of the wheels.

B B are frame-pieces or raves clipped to the axle near their rear extremities, and bent upward at their front ends, as shown in the drawings; or they may be made straight and the shafts T T bent downward to meet them.

T T are the shafts, pivoted to the front extremities of the raves B B, and secured at any desired angle thereto by means of the friction-plates G G, together with the bolts and nuts *d d*.

D D are steel or iron bails or equalizing-rods, pivoted at each end to the raves B B at *a a*, and bent, as shown in Fig. 2, to pass through perforations in the ends of the bed-pieces C C, at right angles thereto, and again bent so as to approach very near each other a little in front of the axle E. The perforations in the bed-pieces C C are made oval or oblong, to allow the bails D D to oscillate freely on their pivots *a a*.

S is a spring passing over the center of the front bed-piece C and attached at its front end to the bottom of the box or body A. The rear end of the spring S is turned into an eye to receive a bolt passing through the ends of the clevis *c*, which encircles the bails D D.

To the bed-pieces C C the body A is securely fastened. The weight applied to any part of the body A is distributed equally through the bails D D to the ends of the bed-pieces C C, which are caused to rise and fall uniformly with reference to the raves B B, to which the bails D D, passing through the ends of bed-pieces C C, are hinged.

To insure the efficiency of the friction-plates G G, they are provided with interlocking projections. In their place, either of the modifications of the device shown in Figs. 3, 4, and 5 may be substituted.

In the device as shown in Fig. 3 the front ends of the raves B B are bent upward and backward, so as to make short horizontal limbs, to which the shafts T T are secured by the bolts *i i*. Between the shaft and the rave the wedge *b* is inserted, and the front bolt *i* is passed through the longitudinal slot shown in Fig. 7. By depressing or withdrawing the wedge *b* the shaft may be adjusted at any desired angle to the rave B, and secured in position by tightening the nuts on bolts *i i*.

In the device as shown in Fig. 4 the shaft T is pivoted to rave B by bolt *d*, as shown in Fig. 1. To the inner side of shaft T the ends of the semicircular brace *f* are attached equi-

distant from the pivot-bolt *d*. The brace *f* slides freely in the loop *g*, attached to the outer side of rave B, and the shaft may be secured at any angle thereto by means of bolt *h*.

In the device as shown in Fig. 5 the shaft T is pivoted to rave B, as delineated in Figs. 1, 2, and 4, and it is extended backward from pivot *d* a little beyond the standard H, which rises perpendicularly from rave B just over axle E. The standard H passes through a mortise in shaft T, and has a series of square notches in one side, with which the spring-catch I engages, holding the shaft at the required angle to rave B. By means of the various forms of the adjustable attachment of the shafts to the raves hereinbefore described, the proper inclination of the seat F and the body sustaining it may be preserved when horses of different sizes are used.

The device as shown in Figs. 1, 3, and 4 is desirable also because it leaves an open space in front of the wheels, allowing of a person easily mounting or dismounting in front of the wheels as well as at the rear.

In the application of my invention as shown in Fig. 6 the same adjustable attachment of the shafts as shown in Figs. 1, 2, and 4 is used, and they are extended in the rear, so that the seat F may be conveniently attached thereto. Here the raves B B and the rear extension of the shafts T T serve as springs, and the pitch or inclination of the seat may be regulated as before described.

I claim—

1. The bails or equalizing-rods D D and spring S, connected and arranged substantially as and for the purposes set forth.

2. The combination, in a two-wheeled vehicle, of the raves B B, shafts T T, adjustably attached thereto, body A, bed-pieces C C, spring S, bails or equalizing-rods D D, pivoted or hinged to raves B B and passing through perforations in the ends of bed-pieces C C, and acting on spring S through clevis *c*, wheels W, and axle E, substantially as and for the purposes herein set forth.

3. The combination, in a two-wheeled vehicle, of the raves B B and shafts T T, adjustably attached thereto by means of the friction-plates G G and bolt *d*, substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOHN A. CHAPMAN.

Witnesses:
E. H. BOTTUM,
CHAS. L. GOSS.