

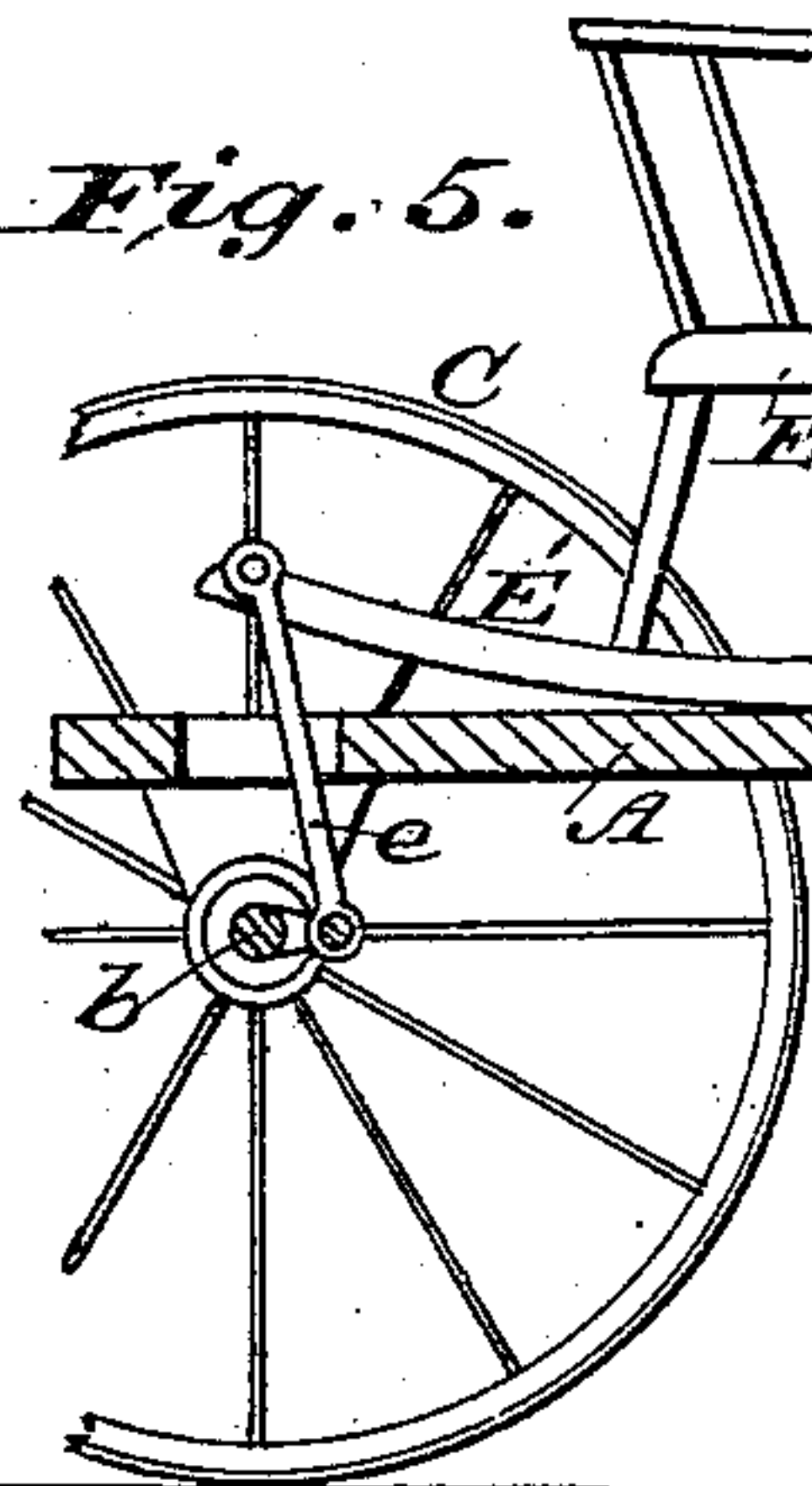
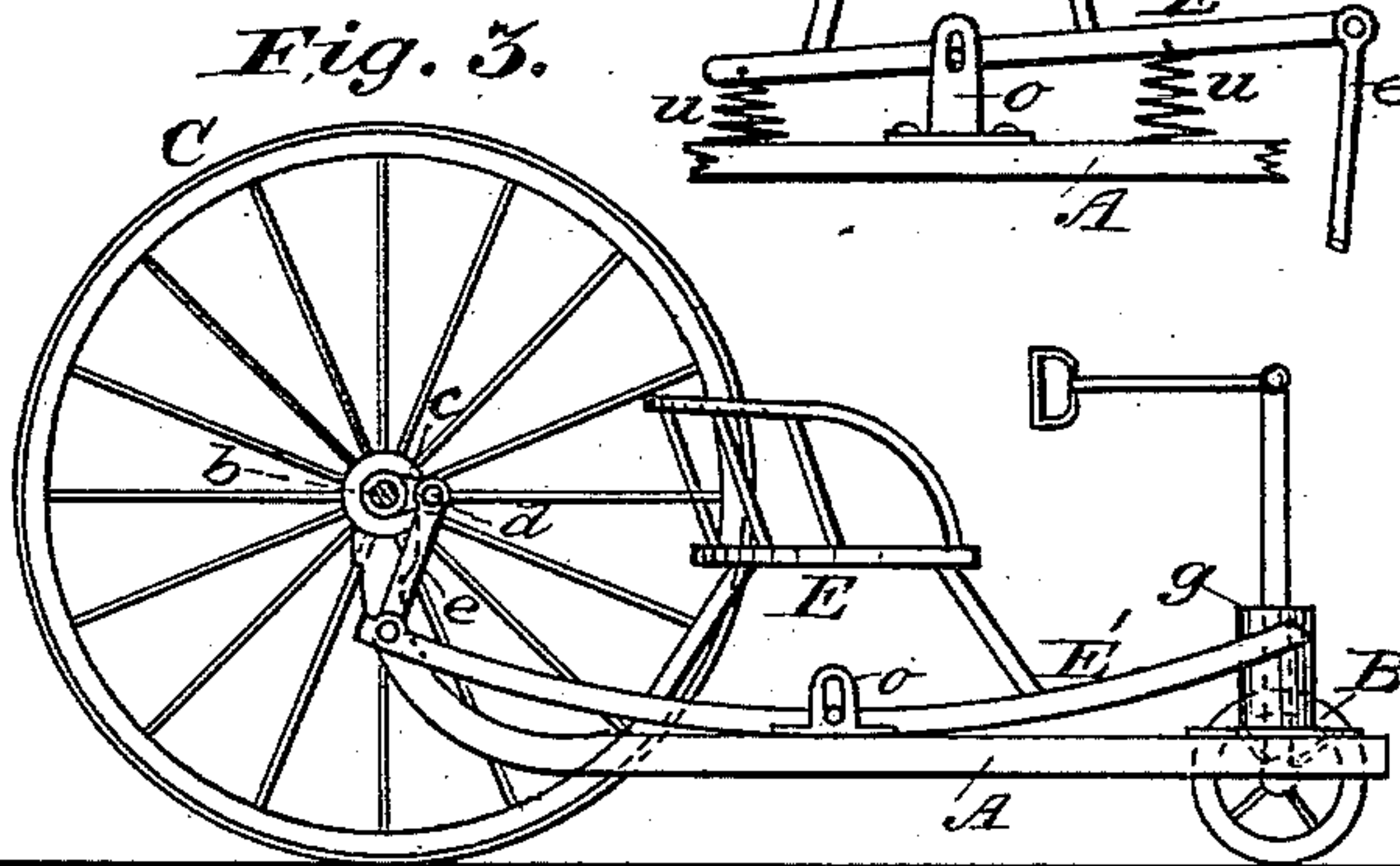
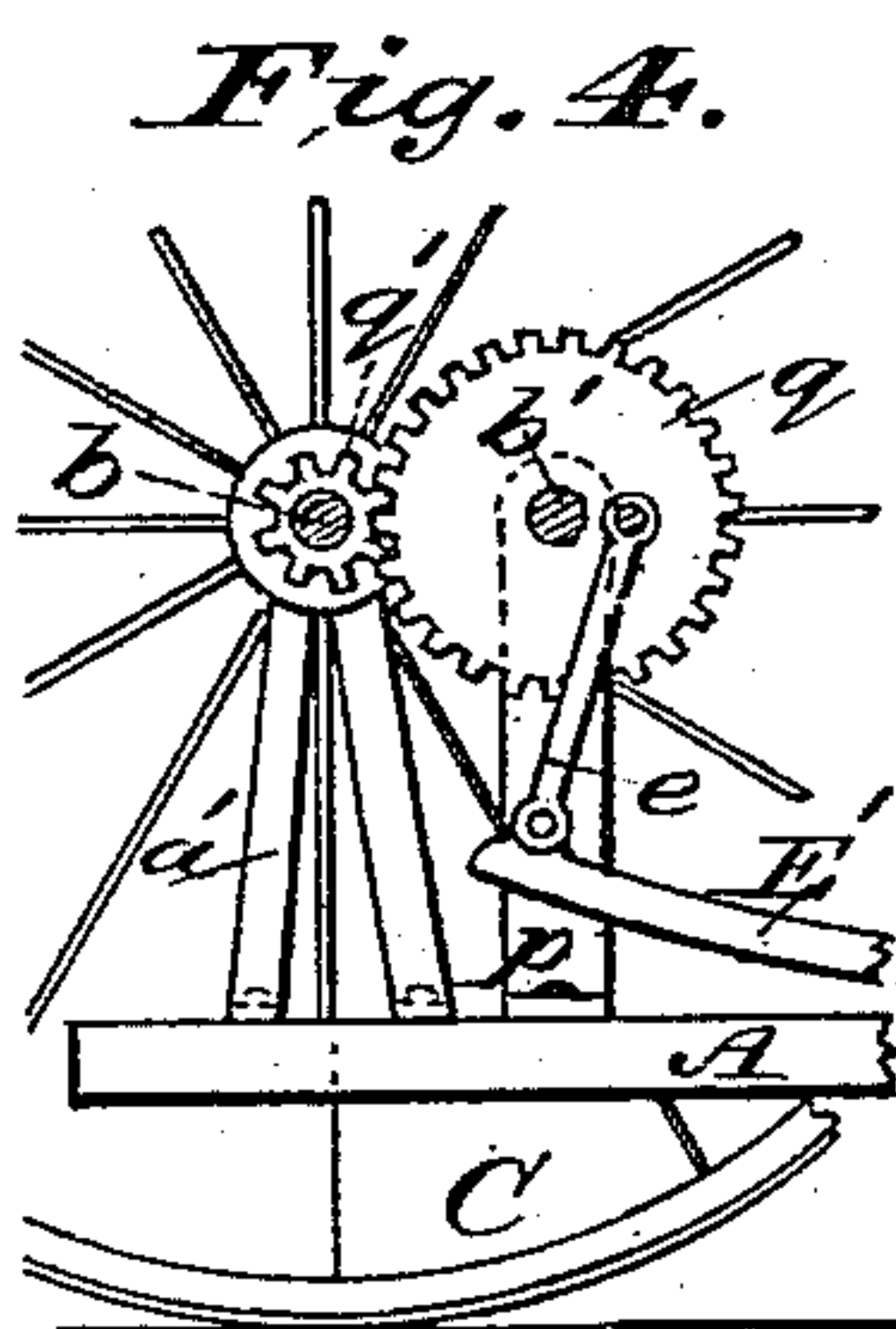
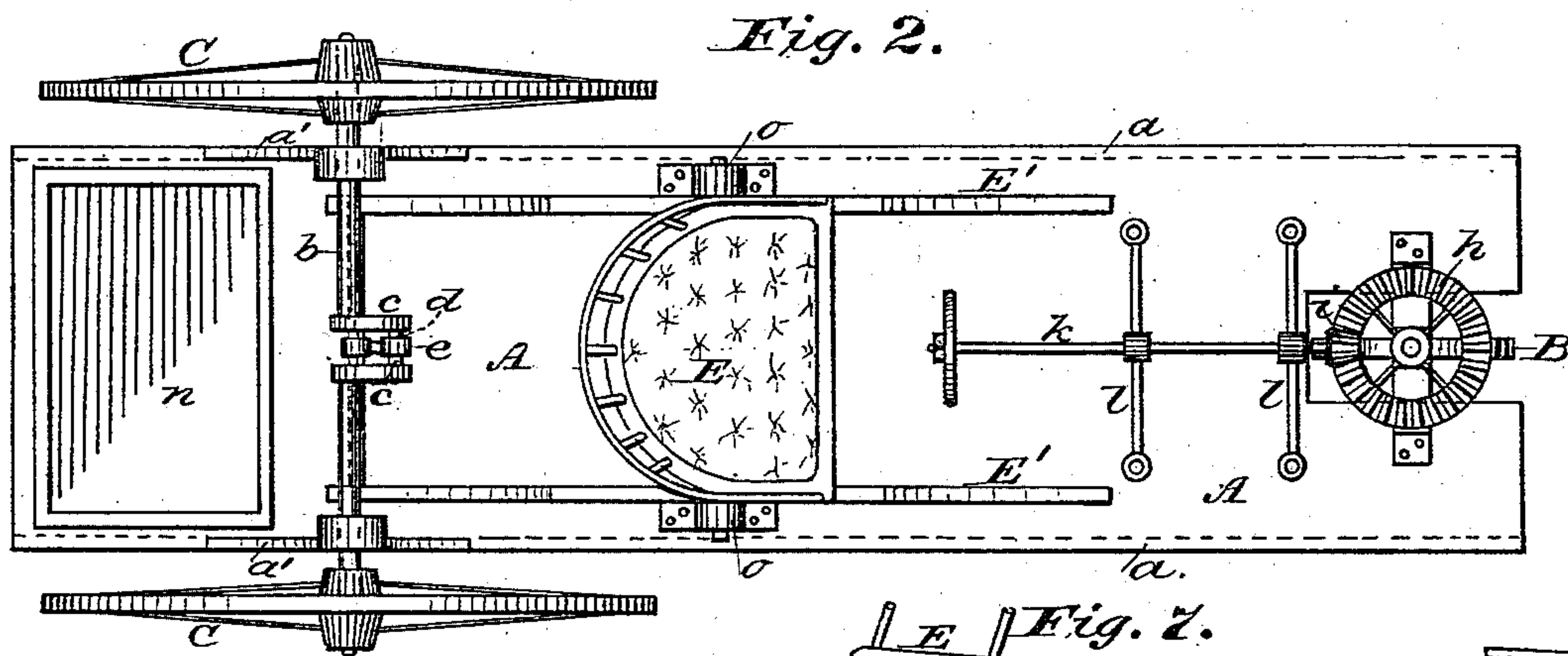
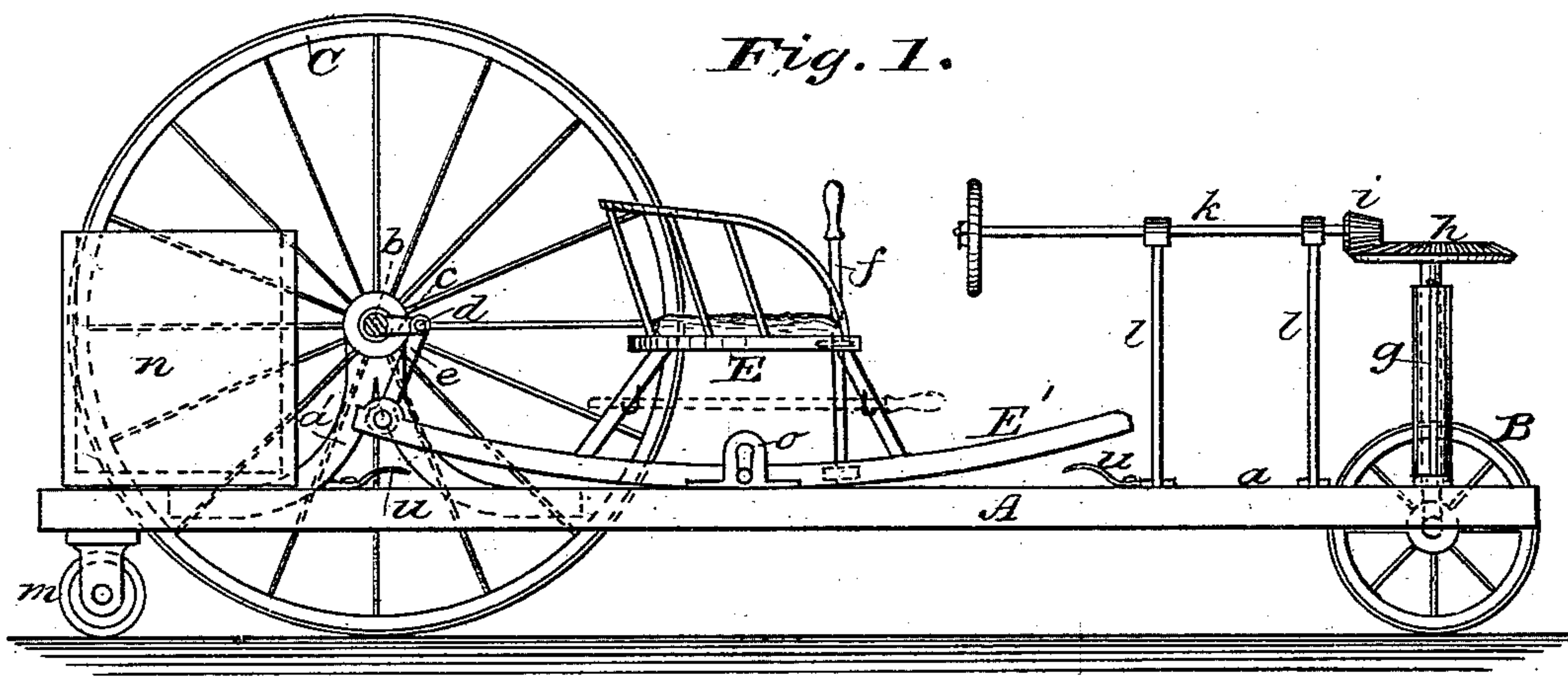
(No Model.)

D. E. DUTROW.

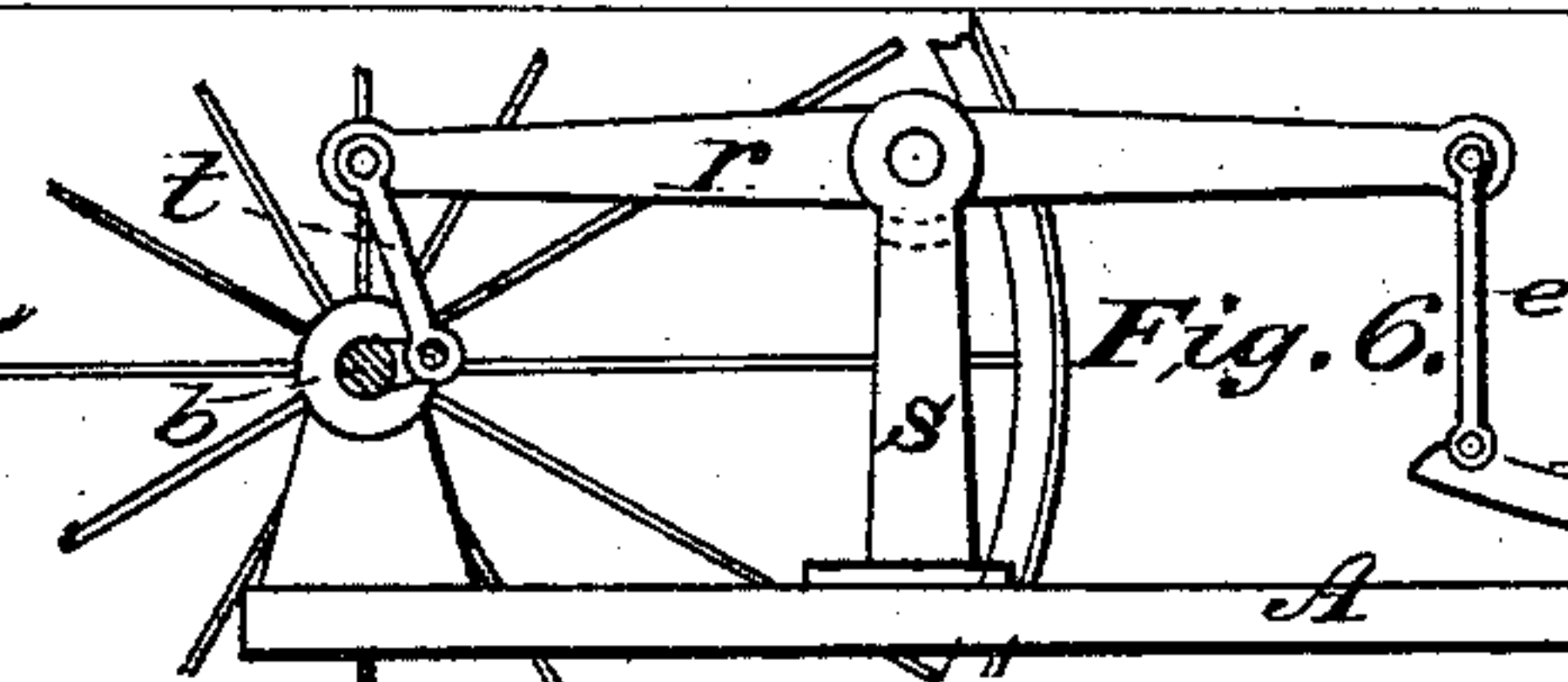
VELOCIPÈDE.

No. 277,246.

Patented May 8, 1883.



Witnesses:  
Louis Priver  
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# UNITED STATES PATENT OFFICE.

DAVID E. DUTROW, OF WASHINGTON, DISTRICT OF COLUMBIA.

## VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 277,246, dated May 8, 1883.

Application filed March 8, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID E. DUTROW, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Mechanical Movements for Conveyances; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to devices for propelling land conveyances or vehicles of any kind, and the object is to accomplish this in an easy and very comfortable and expeditious manner and at a comparatively small expense.

The invention consists in the construction and arrangement of parts, as will be more fully described hereinafter, and more specifically pointed out in the claims, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Like letters indicate like parts in the different figures of the drawings, in which—

Figure 1 represents a side elevation of a vehicle having my invention attached and with one of the rear wheels removed. Fig. 2 is a plan view of the same. Fig. 3 is a modification for a tricycle. Figs. 4, 5, 6, and 7 are modifications of the operating mechanism.

In the drawings, A represents a platform made according to the style of conveyance or vehicle for which it is intended, and of sufficient strength, as required. It may be made of wood or metal, or both combined, if necessary.

In Fig. 1 the frame is made of two side pieces, *a a*, having brackets *a'*, or are bent upward at or near their rear ends, and in them is journaled a shaft or axle, *b*, having two cranks, *c*, connected together by a pin, *d*.

Upon the platform are pivoted one, two, or more rocking chairs or seats, E, the rockers E' of which are connected at their rear end by a pitman, *e*, which connects with the pin *d* of the cranks *c c*. On the seats of said chairs are placed springs or cushions to obviate the jolting occasioned in passing over rough roads.

At the front ends of the rocking-chairs are arranged handles or levers *f*, held in place by staples, and said levers serve to assist in im-

parting the rocking motion. If it is not desired to use said handles, they can be removed from the staples and placed on hooks or in rings attached to the legs of the rocking-chairs.

At the front end of the platform is arranged the steering or guide wheel B, to the axle of which an upright, *g*, is secured, having a rack or wheel, *h*, attached at its upper end, into which a segment or pinion, *i*, meshes. This segment is secured on a horizontal rod or shaft, *k*, supported on two uprights, *l*, and is provided with a suitable handle, with which the steering-wheel can be operated by the occupants of the rocking-chairs.

At the rear end the platform is supported on the driving-wheels C, made of any suitable size and shape, as also of iron, wood, steel, or other material, and they are mounted on the above-described crank-axle *b*. These wheels impart motion to the vehicle or conveyance when the occupants of the rocking-chairs move their bodies to and fro, as in ordinary rocking, and when connected.

A small caster-wheel, *m*, supports the rear end of the platform when a load is to be carried thereon, and for convenience one or more suitable receptacles or boxes, *n*, may be secured to said platform. The caster or pivot wheel serves for the purpose of preventing tilting when the occupants have left their seats. Receptacles of proper size may be also arranged under the rocking-chairs, if desired.

Instead of one steering-wheel at the front end, two may be employed, if desired, and they may be operated by any suitable steering mechanism.

If desired, the driving-wheels and steering-wheel could be reversed—i. e., the former arranged at the front end of the platform and the latter at the rear end thereof.

The receptacles may be made detachable or permanent, and, especially on larger vehicles, a roof or covering may be attached to shield the occupants of the rocking-chairs against the heat and inclemencies of the weather.

These conveyances or vehicles can be made of any size and shape desired, to suit different purposes, both for pleasure and amusement, as well as for business and purposes of traffic,



and can be employed for mail-wagons, milk or market wagons, and for any purpose whatever. They are well adapted as a tricycle or carriage for children, and especially for girls or ladies.

5 They can be made as shown in Fig. 3, in which case the rear extended end of the platform, as well as the box or receptacle, and also the caster or pivot wheel are dispensed with. They are less dangerous and not so liable to  
10 upset as the ordinary tricycle.

If desired, these vehicles can be made very ornamental and showy or very plain, and by increasing the size of the driving-wheels and cranks on the axle they can be made to travel  
15 at a very high rate of speed. They are not liable to get out of order, and are always ready for use and without much preparation.

Instead of employing one set of cranks on the axle *b* and one pitman *e*, two such sets of  
20 operating mechanism may be employed. The pitmen are then connected to the rear ends of the rockers, instead of being connected to the rung between the rockers, as represented in the drawings. The steering mechanism for  
25 the small vehicles or tricycles can also be of the ordinary kind now used.

The brackets *o*, to which the rockers are pivoted, are provided with suitable slots to allow for the movement of the rockers, which  
30 is very important.

In Fig. 4 the rocking-chairs are connected by the pitman *e* to a crank or cranks on a counter-shaft, *b'*, journaled on suitable brackets, *p*, secured to the platform. On the counter-shaft is secured a gear-wheel, *q*, which  
35 meshes into a pinion, *q'*, on the axle *b*, and according to the difference in size of the gear-wheels the speed of the driving-axle can be regulated or increased.

40 In Fig. 5 the platform is elevated and the axle *b* arranged below it, and the crank of said axle *b* connected by pitman *e* to the rockers, and in this instance the movement is downward instead of upward.

45 In Fig. 6 the rockers are connected by pitman *e* to one end of a walking-beam, *r*, supported on a suitable column or stand, *s*, while the other end is connected by a link or pitman, *t*, to the crank-axle *b*, upon which the  
50 driving-wheels are mounted.

In Fig. 1 springs *u* are secured to the platform *A*, under the ends of the rockers, to prevent them sticking on the dead-centers and to assist in carrying them over said centers.

55 When two or more rocking-chairs are to be used the platform is extended, and the chairs are then connected by side rods or levers, made adjustable and extending from one to the other of said chairs.

60 Instead of using two driving-wheels, one may be employed at the front or rear end, and two

steering-wheels. The connecting-rods or rockers are then bent so as to engage with the cranks on the driving-axle.

In Fig. 7 is represented another form of operating mechanism in which the rockers *E'* of the rocking-chairs *E* are made straight, instead of curved, and are supported on volute or coil springs *u*. The bracket *o* is also slotted, although it is not necessary, as the rockers can  
65 be arranged to work in a journal or on a pivot. The pitman *e* can be connected to the crank, as described above.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, 75 is—

1. The combination, in a vehicle, of a platform, *A*, supported on driving-wheels *C*, mounted on a crank-axle, *b*, and having a caster-wheel, *m*, arranged at the rear end, and provided with a steering-wheel, *B*, at the front  
80 end, with one or more rocking-chairs, *E*, having rockers *E'*, connected to cranked axle *b* by pitmen *e*, all substantially as specified.

2. The combination, in a vehicle, of the platform *A*, driving-wheels *C*, and one or more rocking-chairs having rockers *E'*, centrally pivoted in brackets *o*, provided with vertical slots, with the steering-wheel *B*, upright *g*, and gearing  
85 *h i*, shaft *k*, and upright *l*, all as specified.

3. A vehicle having a platform, *A*, provided with an elevated crank-axle, *b*, upon which the driving-wheels *C* are mounted, in combination with the pitman *e*, connected to the rockers  
90 *E'*, centrally pivoted in slotted bearings *o*, the springs *u*, and a steering-wheel, *B*, as set forth.

4. In a vehicle, the combination of a platform, *A*, supported on suitable wheels, and one or more rocking-chairs, *E*, having rockers *E'*, with springs *u*, for carrying said rocking-chairs  
100 over the dead-centers, substantially as specified.

5. In a vehicle, the combination of a platform, *A*, supported on wheels, and the crank-axle *b*, connected to the rockers *E'* by pitmen *e*, which receive motion by means of occupants of the rocking-chairs *E*, and are assisted over the dead-centers by springs *u*, arranged as  
105 shown.

6. The combination of a platform, *A*, provided with elevated bearings for the crank-axle *b*, upon which the driving-wheels *C* are mounted, with the pivoted rocking-chairs *E*, the pitmen *e*, connected to the rockers *E'*, the slotted brackets *o*, the springs *u*, and a steering-wheel, substantially as set forth.  
115

In testimony whereof I affix my signature in presence of two witnesses.

DAVID E. DUTROW.

Witnesses:

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LLOYD F. KELEHER.