

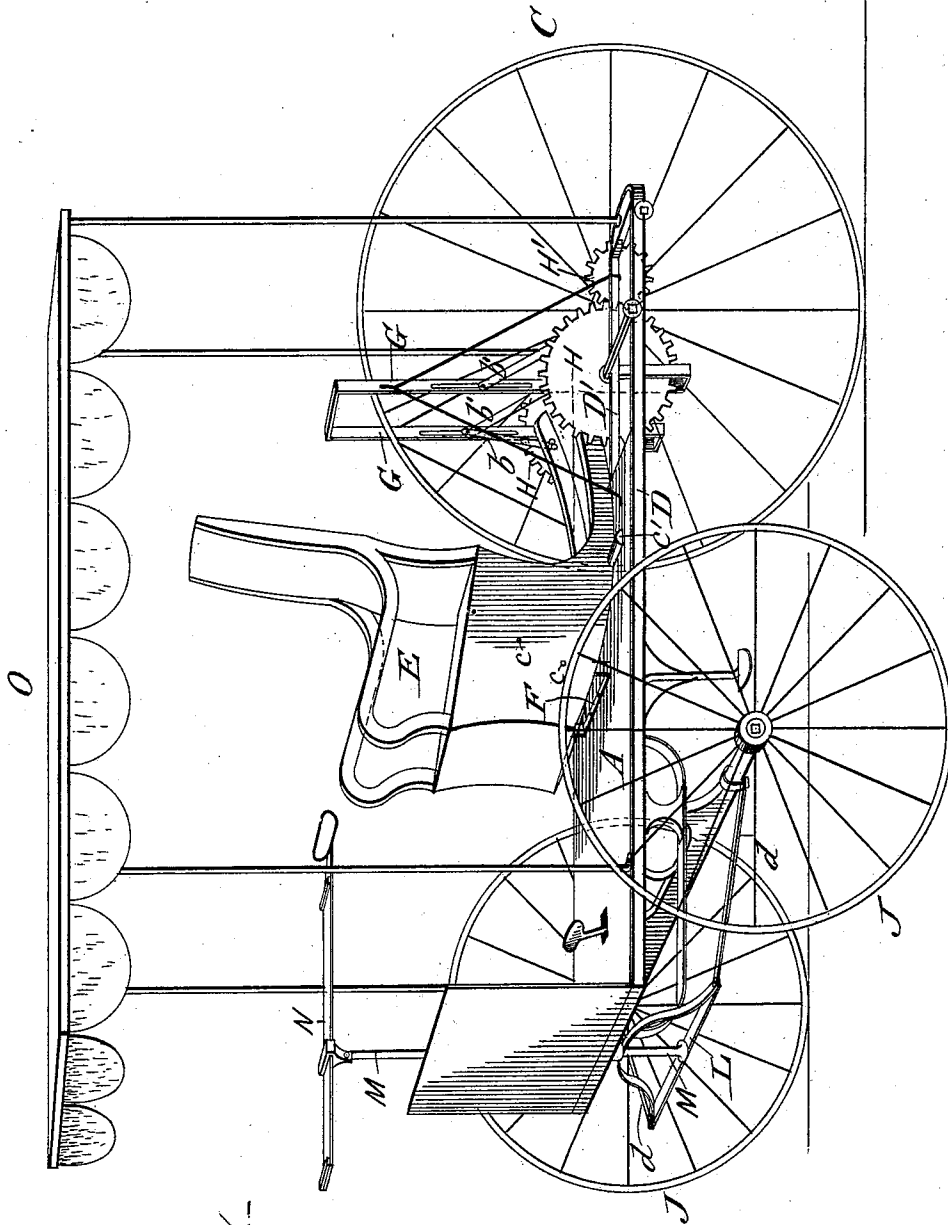
(No Model.)

2 Sheets—Sheet 1.

J. D. RULLMAN & G. ECKENROTH.  
VELOCIPEDE.

No. 406,148.

Patented July 2, 1889.



Witnesses

*H. H. Schott*  
*W. Burroughs.*

Inventor

*J. D. Rullman*  
*G. Eckenroth*

By Their Attorney

*W. H. Chandler*

(No Model.)

2 Sheets—Sheet 2.

# J. D. RULLMAN & G. ECKENROTH. VELOCIPEDE.

No. 406,148.

Patented July 2, 1889.

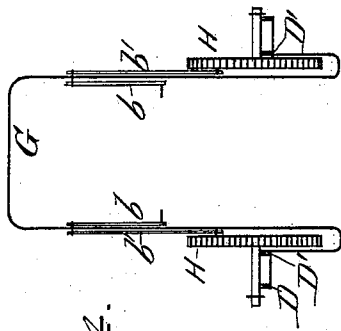


Fig. 4.

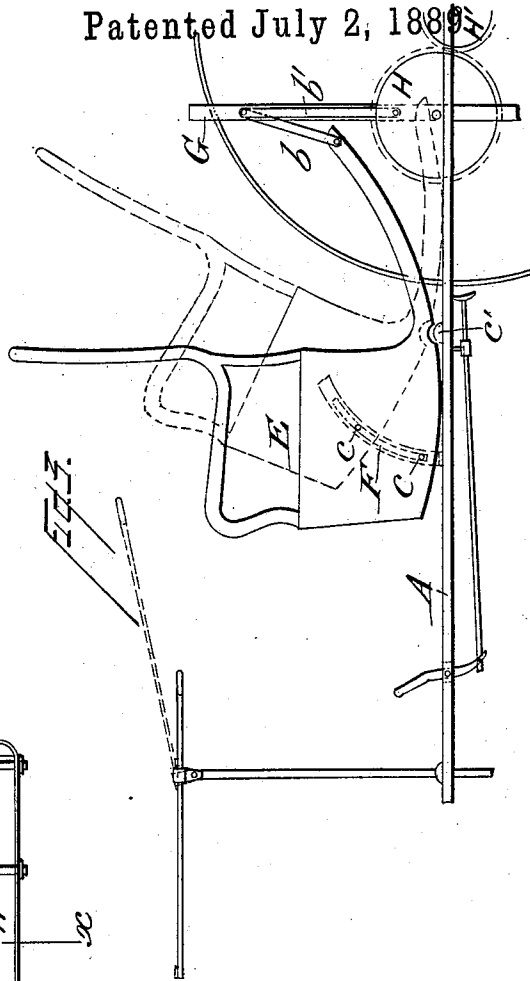


Fig. 3.

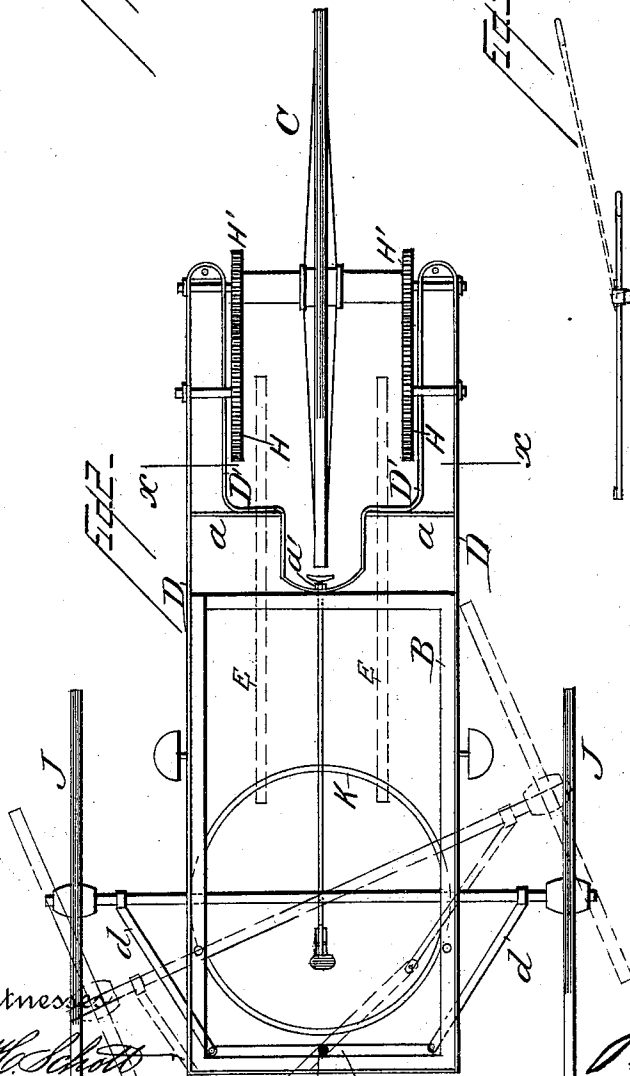


Fig. 2.

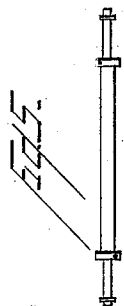


Fig. 5.

Witnesses  
*J. H. Schott*  
*A. Burroughs*

Inventor  
*J. D. Rullman*  
*G. Eckenroth*  
 Attorney  
*W. H. Chandler*

# UNITED STATES PATENT OFFICE.

JOHN D. RULLMANN AND GEORGE ECKENROTH, OF SAN ANTONIO, TEXAS;  
SAID RULLMANN ASSIGNOR TO SAID ECKENROTH.

## VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 406,148, dated July 2, 1889.

Application filed March 13, 1888. Renewed January 18, 1889. Serial No. 296,792. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN D. RULLMANN and GEORGE ECKENROTH, of San Antonio, in the county of Bexar, State of Texas, have invented certain new and useful Improvements in Velocipedes, of which the following is such a full and complete description as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, in which similar letters of reference indicate like parts in the different figures.

Figure 1 is a perspective view of the machine complete and ready for use. Fig. 2 is a plan view of the mechanism, the canopy and platform being removed. Fig. 3 is a side elevation showing the rocking-chair and its connections with the gearing by which the driving-wheel of the vehicle is rotated. Fig. 4 is a transverse section of the machine on the line *x x* of Fig. 2. Fig. 5 shows the axle upon which the propelling-wheel is mounted.

This invention relates to that class of velocipedes in which the rotation of the propelling-wheel is produced by the oscillation of a rocking-chair, and is especially designed for the use of ladies and children. In constructing this machine we first form a light rectangular platform of wood, which is surrounded on the front and both sides with a light band of steel. This band extends to the rear of the platform a sufficient distance to form a support for the propelling-wheel axle, and is bent inward and returns to the platform, to which it is secured. By this construction and method of applying the band two arms are formed extending to the rear from the platform with a space or recess between them, in which is placed the propelling-wheel and its driving-gear. The rocking-chair, from which motion is communicated to this gear, is placed on the platform and connected therewith by two curved and slotted guides and suitable projections which enter corresponding recesses in the bottom of the rockers. These rockers extend to the rear of the chair, and have their extremities connected with a pair of spur-gears by means of suitable connecting-rods. The spur-gears engage with the pinions mounted upon the axle of the propelling-wheel, which

thus receives its motion from the oscillation of the chair, the arrangement of the gearing between the chair and the wheel being preferably such as to give the wheel two complete revolutions to each oscillation; but these proportions may evidently be varied to suit different sizes of propelling-wheels and other exigencies that may arise. For the purpose of guiding the velocipede, the forward axle, which is pivoted to the under side of the platform, is connected by rods to a vertical shaft, upon the upper end of which is an oscillating loop, through which passes a sliding arm. This arm is provided at one end with a handle coming into a convenient position for the grasp of the occupant of the chair, who by turning the arm to the right or left guides the machine, while said arm, freely sliding through the oscillating loop, does not interfere with the movement of the chair. A brake acting upon the periphery of the propelling-wheel and operated by the foot is also supplied, thus giving to the occupant of the chair full control of the machine.

To fully understand the construction of the machine, it will now be described in connection with the drawings.

A represents the platform resting upon the rectangular frame B, which, as before stated, is surrounded upon three sides by the steel band or plate D. This band extends in rear of the platform at each side to a considerable distance, and is then bent so that a part D' returns parallel to the outer portion, with which it is connected by the braces *a a*, and from the point of attachment to these braces is bent still farther inward and secured to the frame B by a bolt at *a'*. These extensions of the band D form the frame which supports the propelling-wheel C and its gearing.

The propelling mechanism consists of a rocking-chair E, mounted upon the platform A, and attached thereto by means of guide-pins *c*, moving in slots in the curved arms F, secured to and projecting upward from the platform. In the rear of these slotted guides are guide-pins *c'*, projecting upward from the platform and entering recesses in the bottom of the rockers when the chair is rocked back-

ward, thus assisting in keeping the same in its proper position on the platform. The rockers extend to a considerable distance in rear of the chair, their extremities being connected by a rod *b* with cross-heads sliding in the vertical guides *G*, secured to the band *D*. These cross-heads are connected by rods *b'* with a crank-pin in the gear-wheels *H*, which wheels engage with the pinions *H'* on the axle of the propelling-wheel. By this arrangement of mechanism it will be apparent that as the chair is rocked the propelling-wheel *C* will be rotated and the carriage moved forward. As but one propelling-wheel is used, it becomes necessary to provide means for keeping the machine upright and guiding it. This is accomplished by placing under the forward end of the platform an axle carrying upon each end a loose wheel *J*. A circular plate *K* is also attached to the under side of said platform, resting upon suitable wear-plates upon the axle. The platform is thus supported at three points and retained in a horizontal position. Attached to the axle, near the wheels *J*, are two connecting-rods *d*, their opposite ends pivoted to the extremities of an oscillating lever *L*. This lever is secured to the lower end of a vertical standard *M*, that turns in suitable bearings attached to the front end of the carriage-frame. This standard projects upward to some distance above the platform, and is provided at its upper end with a loop, through which slides the handled lever *N*. The handle of this lever extends to a position where it may readily be grasped by the operator of the machine, and as he moves back and forth, in rocking, the lever will slide freely through the loop on the top of the standard, but is always in position to act upon the standard, and, through the connections attached to its lower end, upon the axle, thus enabling the operator to turn

said axle to the right or left and properly guide the machine.

If desired, a canopy *O* may be carried upon light supports over the platform, to afford protection from the sun and rain, and additional seats may, if desired, be placed in front or in rear of the rocking-chair, to accommodate one or more persons in addition to the person who, seated in said chair, propels the machine.

Having thus described our invention, we claim as new, and desire to secure by Letters Patent, the following:

1. As an improvement in velocipedes, the combination, with a rocking-chair mounted upon a platform of the vehicle and retained in position by the slotted curved guides *F* and pins *c'*, of the rods *b*, pivoted to the rockers of said chair and to a cross-head moving in vertical guides, the rods *b'*, connecting said cross-head with the crank-pin of a gear-wheel *H*, the pinion *H'*, and propelling-wheel *C*, all constructed and arranged substantially as and for the purpose shown and described.

2. As an improvement in velocipedes, the platform *A* and frame *B*, in combination with the steel band *D*, encircling three sides of said frame and platform and extending in rear thereof to form the supports for the propelling-wheel and its gearing, as set forth.

3. As an improvement in steering-gear for velocipedes, the combination, with the front axle, of the lever *L*, its connections with said axle, the standard *M*, provided with a loop at its upper end, and the sliding handled lever *N*, all arranged and operated as shown and described.

JOHN D. RULLMANN.  
GEORGE ECKENROTH.

Witnesses:

JULIUS FRANK,  
JOHN UMSCHIED.