(No Model.)

G. SCHLOEMER & E. HAUSKNECHT.

VELOCIPEDE.

No. 409,758. Patented Aug. 27, 1889.

Fig. 1.

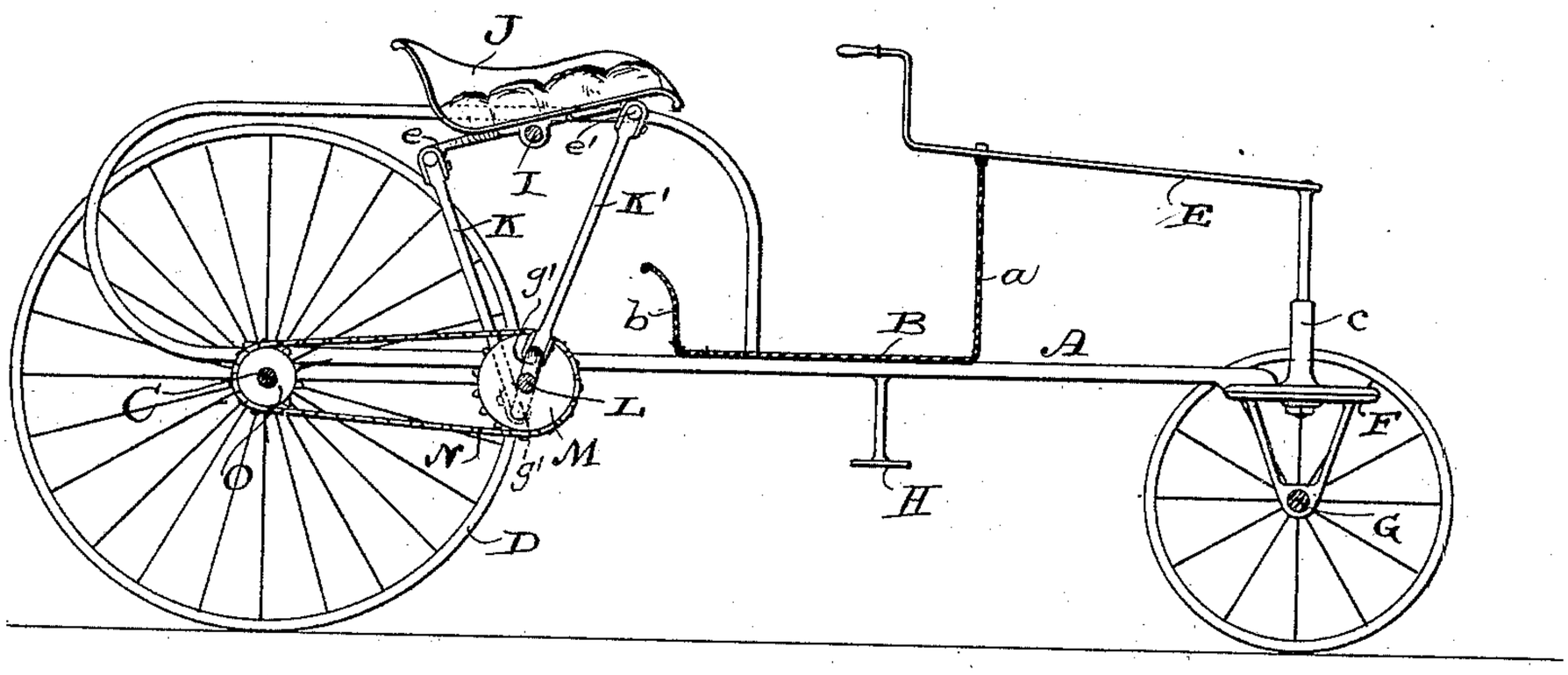
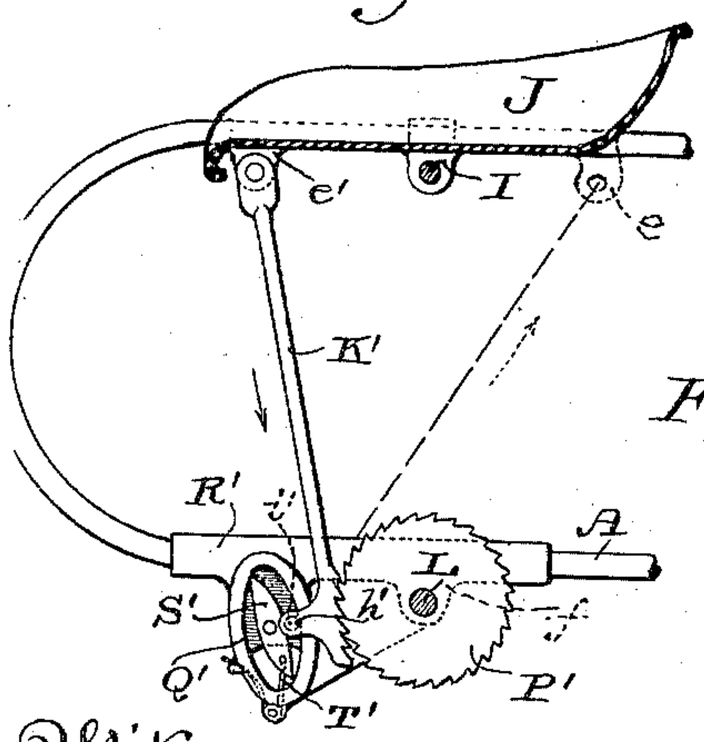


Fig. 2.

Fig. 3.



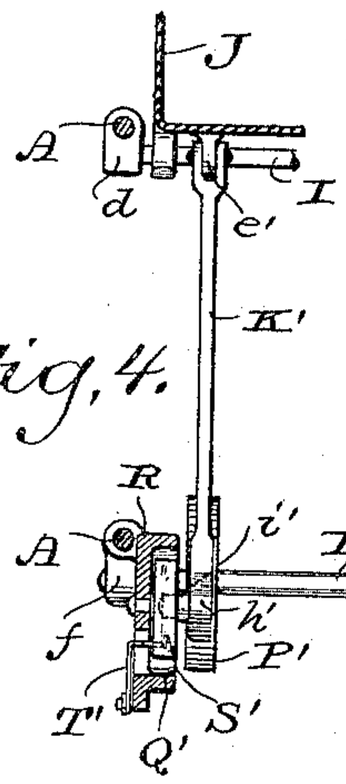


Fig. 4.

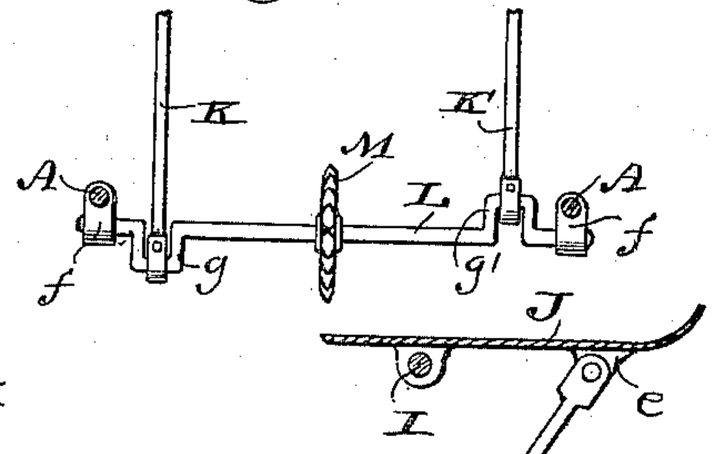
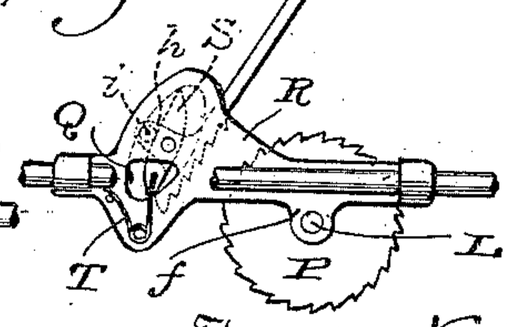


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

GOTTFRIED SCHLOEMER AND EDUARD HAUSKNECHT, OF MILWAUKEE, WISCONSIN.

VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 409,758, dated August 27, 1889.

Application filed December 10, 1888. Serial No. 293,132. (No model.)

To all whom it may concern:

Be it known that we, GOTTFRIED SCHLOEMER and EDUARD HAUSKNECHT, of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Velocipedes; and we do hereby declare that the following is a full, clear, and exact description thereof.

Our invention relates to velocipedes; and it consists in certain peculiarities of construction and combination of parts, to be hereinafter described with reference to the accompanying drawings and subsequently claimed.

In the drawings, Figure 1 represents a longitudinal vertical section of a velocipede constructed according to our invention; Fig. 2, a detail elevation illustrating the drive-shaft and connections employed in the velocipede illustrated by the preceding figure; Fig. 3, a vertical longitudinal section of a portion of the velocipede, illustrating another form of driving-gear; Fig. 4, a front elevation, partly in section, of Fig. 3; and Fig. 5, a view similar to Fig. 3, excepting that the section is taken on a line nearer the observer.

Referring by letter to the drawings, A represents a skeleton frame that supports a platform B, the latter having front and rear dash-boards *a b*. At its rear end the frame A is provided with bearings for an axle C, and fast on this axle are the rear wheels D of our velocipede.

At the front the frame A is provided with a bearing *c* for the vertical portion of a crank-rod E, that is attached to a turn-table F and extended back to come within easy reach of the rider and rest on the serrated edge of the dash-board *a*, said turn-table being provided with bearings for the axle G of the front or guide wheels of our velocipede. The frame A is also provided with a step H, to assist the rider in mounting.

The side arms of the frame A are provided with bearings *d* for a shaft I, to which is rigidly secured the seat J of our device, and secured to the under side of this seat, on opposite sides of its shaft, are shackles *e e'* for driving-rods K K', that are either directly or indirectly connected with a shaft L, journaled in bearings *f* on the frame A, and fast on the latter shaft is a sprocket-wheel M, connected by a drive-chain N with another sprocket-wheel O on the axle C.

In Figs. 1 and 2 we show the shaft L as provided with two crank-bends *g g'*, for connection with the driving-rods K K'; but in the remaining figures we show said shaft as provided with ratchet-wheels P P', and the lower ends of said driving-rods are serrated to engage the ratchet-wheels. The serrated lower ends of the driving-rods K K' are provided with ears *h h'*, and from these ears project lugs *i i'*, that travel upon elliptical tracks or guides Q Q' in castings R R', the latter being fast on opposite sides of the frame A and arranged so that said tracks extend in opposite directions. Pivoted to the castings R R', within the elliptical tracks Q Q', are cams S S', that are held in their normal position by springs T T', as best illustrated in Fig. 5.

The cams keep the lugs *i i'* against the elliptical tracks and prevent backward movement of the driving-rods. In either form of driving-gear motion is imparted by a rocking movement of the rider on the seat J. As shown by Figs. 1 and 2, the drive-shaft L is cranked and connected to the seat by driving-rods, and hence the operation is apparent without further description.

The driving-gear shown by Figs. 3, 4, and 5 is the one preferred, and its operation is as follows: Assuming that the serrated end of the driving-rod K' is in engagement with the adjacent ratchet-wheel P', a forward rock of the rider will push down on said rod to thereby actuate said ratchet-wheel and revolve the shaft L. As the rod K' finishes its stroke, the cam S' will be moved against the force of its spring T', to permit the lug *i'* to slip past and start up on the return side of the elliptic track Q', and the driving-rod K will be in engagement with the ratchet-wheel P, ready to actuate the latter when the rider rocks backward, said driving-rods alternating in their action to cause a propulsion of our device, the speed depending somewhat on the rapidity with which said rider oscillates the seat.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a velocipede, the combination of a drive-shaft geared to an axle of the machine, a shaft supported in bearings on the machine-frame, a seat fast on the latter shaft, and rods shackled at their upper ends to the seat on opposite sides of said latter shaft and having their lower ends connected to said drive-shaft, substantially as set forth.

2. In a velocipede, the combination of a drive-shaft and rear axle carrying sprocket-wheels, a drive-chain arranged on said sprocket-wheels, an oscillating seat, and driving-rods connected to said shaft and shackled to said seat on opposite sides of its center, substantially as and for the purpose set forth.

3. In a velocipede, the combination of a drive-shaft geared to the rear axle of the machine, ratchet-wheels fast on the shaft, an oscillating seat, driving-rods shackled to the seat and having serrated lower ends for engagement with said ratchet-wheels, and guides for said rods, substantially as and for the purpose set forth.

4. In a velocipede, the combination of a drive-shaft geared to the rear axle of the machine, ratchet-wheels fast on the shaft, an oscillating seat, driving-rods shackled to the seat and having serrated lower ends for engagement with said ratchet-wheels, elliptical tracks or guides, lugs on said rods arranged to travel on the tracks, and pivoted spring-controlled cams arranged with relation to said tracks, and lugs whereby the latter are kept in frictional contact with the former and locked against backward movement, substantially as set forth.

In testimony that we claim the foregoing we have hereunto set our hands, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

GOTTFRIED SCHLOEMER.
EDUARD HAUSKNECHT.

Witnesses:
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