(No Model.)

W. B. DENTON.

VELOCIPEDE.

No. 279,356. Patented June 12, 1883.

Fig 1

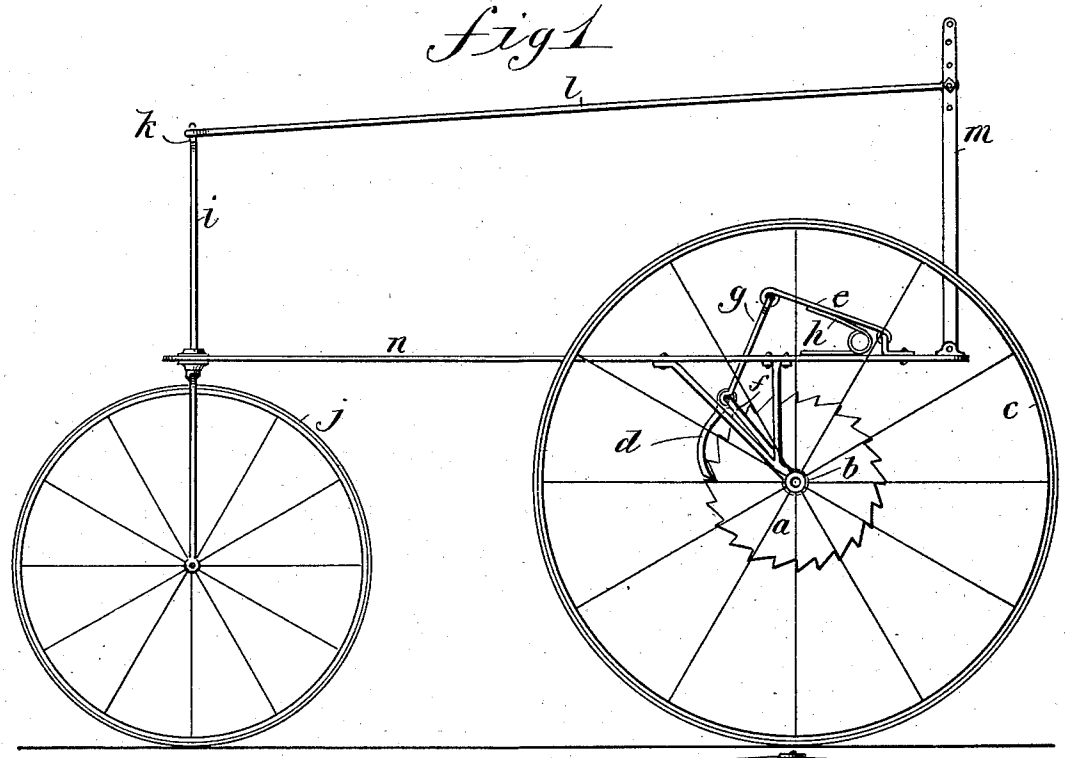
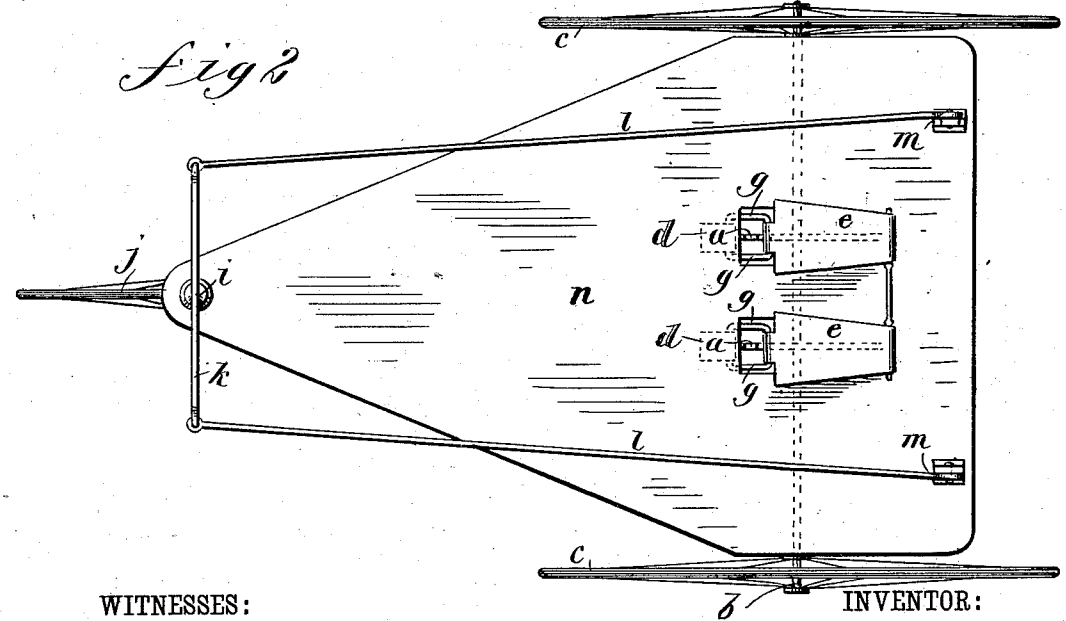


Fig 2



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM B. DENTON, OF WICHITA, KANSAS.

VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 279,356, dated June 12, 1883.

Application filed April 18, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. DENTON, of Wichita, in the county of Sedgwick and State of Kansas, have invented a new and Improved Velocipede, of which the following is a full, clear, and exact description.

My invention consists of an improved arrangement of foot-treadle mechanism for applying the power for propelling velocipedes and other vehicles; also, of an improved arrangement of steering apparatus for vehicles having my improved propelling-gear, all as hereinafter fully described.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a side elevation of a three-wheeled road-vehicle provided with my improved propelling and steering gear, and Fig. 2 is a plan view.

I propose to provide ratchet-wheels *a* on the axle *b* of the driving-wheels *c*, and pawls *d* in connection with the foot-treadles *e* and said ratchet-wheels, so that the treadles will act on the axles through said ratchets and pawls, instead of cranks, as commonly arranged, by which dead-centers are avoided, and the wheels may continue to run when the treadles have ceased to act, allowing the operator to stand on them without working the machine, thus saving the trouble of stepping off in any case when it may be preferred to allow the machine to continue its motion by momentum or otherwise. The arrangement also enables the operator to govern his action to suit his preference with respect to the throw or range of his tread.

For a simple means of connecting the treadles and pawls, I make a yoke, *f*, to fit on the axle and swing across the face of the ratchet-wheel, to which yoke I connect the treadle by a rod, *g*, and also connect the pawl *d* to *f* by pivoting it thereon. The pawl is therefore free to swing and allow the teeth of the ratchet to pass, and it swings up and down with the yoke to turn the ratchet, the yoke being worked by the treadle. The treadles are provided with springs *h* to raise them after being pressed down by the operator. The operator will stand on the treadles, and will work them alternately, as in walking; but, if desired, a seat may be contrived with relation to the treadles so that he may sit while working them, when desired.

For steering the machine the post *i* of the guiding-wheel *j* has a cross-bar, *k*, on the top, the ends of which are connected by rods *l* with the levers *m*, respectively, said levers being fixed in upright position, and jointed to the bed or platform *n* in such relation that the operator may hold to them for steadying himself when working the treadles, and at the same time may operate them for guiding the machine.

In this case I have represented a machine of three wheels; but it may have four, if preferred.

The contrivance is applicable for working small foot-power cars for railroad-inspectors and the like.

Any approved style of brake may be applied to the wheels of the machine, said brake to be operated by a foot-treadle or lever, or in any manner most suitable or convenient.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a tricyle, the combination, with the axle *b*, of the ratchet-wheel *c*, the pivoted pawl *d*, the spring-supported treadles *e*, the yoke *f*, and the rod *g*, whereby the yoke is operated by the treadles and the pawl made to swing up and down with it, as described.

2. The combination, in a velocipede, of the foot-power mechanism for applying the power by treadles *e*, and the steering-gear connected with levers *m*, said levers being jointed to the bed or platform, and arranged upright and in the relation to the treadles, whereby the operator may operate them while standing on the treadles, substantially as described.

WILLIAM B. DENTON.

Witnesses:
A. C. BROKAN,
W. H. DAVIS.