

(No Model.)

H. T. STOCK.

HAND CAR.

No. 261,966.

Patented Aug. 1, 1882.

FIG. 1.

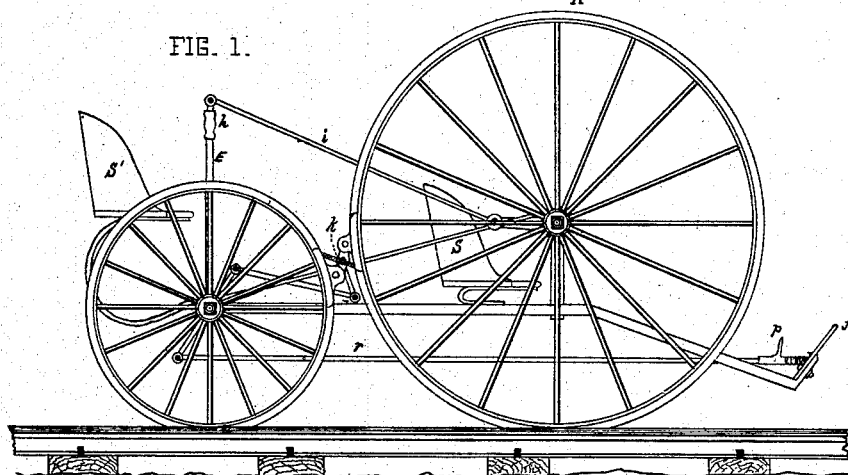


FIG. 2.

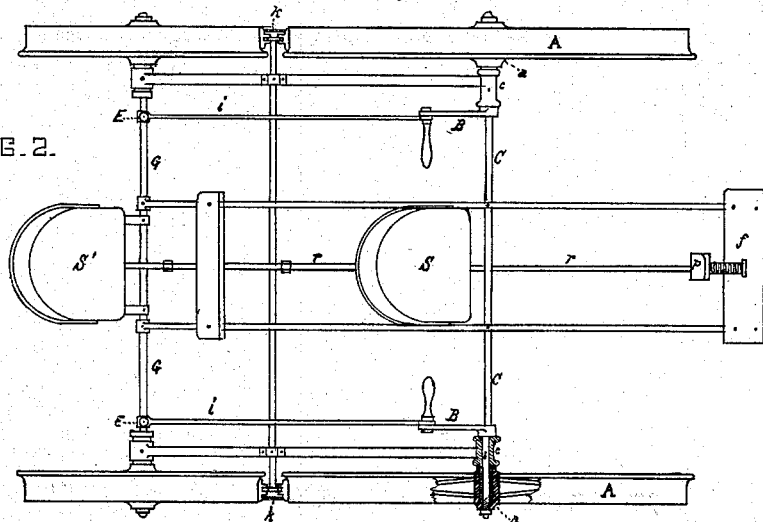
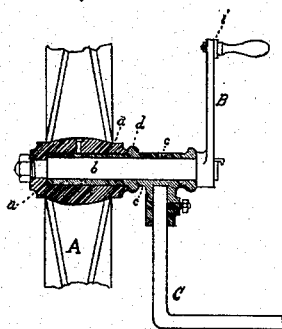


FIG. 3.



WITNESSES.

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HOSEA T. STOCK, OF TOLEDO, OHIO.

HAND-CAR.

SPECIFICATION forming part of Letters Patent No. 261,966, dated August 1, 1882.

Application filed May 20, 1882. (No model.)

To all whom it may concern:

Be it known that I, HOSEA T. STOCK, of Toledo, Lucas county, Ohio, have invented certain new and useful Improvements in Railroad Velocipedes or Hand-Cars, of which the following is a specification.

My invention relates to the form and manner of construction of railroad velocipedes and hand-cars and the various parts thereof; and the objects of my invention are, first, by means of the arrangement of the driving-wheels so as to operate independently of each other on short independent shafts or axles, to afford space for the operator midway between the driving-wheels, permitting the use of as large driving-wheels as may be desired, thus securing means of easy and rapid propulsion, absence of gearing, and lightness and simplicity of parts; second, to provide such independent driving-wheels with suitable journals and bearings, constructed as hereinafter described, so as to obviate the necessity for axles which extend across the entire width of the machine, leaving sufficient room for the operator and providing for due stiffness of the machine; and, third, to provide such machine with adjustable detachable extra seats, in connection with the cranks of the machine, so arranged as to enable an occupant of such extra seat to assist in propelling the machine. I attain these objects by the mechanism illustrated in the accompanying drawings, which are made part of this specification, in which—

Figure 1 is a side view of my device, and Fig. 2 is a top view and plan of the same, and Fig. 3 is a longitudinal section in detail through the center of the journal of one of the driving-wheels.

Similar letters refer to similar parts throughout the several figures.

My device, as illustrated, is of the four-wheeled class of velocipedes or railroad hand-cars, though the improvements herein described may obviously, with a modification of the frame of the machine, be applied to the three-wheeled kind as well. The two forward wheels are the driving-wheels, the operator having his seat midway between the two and below and back of their center, and propelling the same by means of hand-crank. In order to give the

operator space to sit between the driving-wheels and to turn the cranks, it is impracticable to place the two driving-wheels upon a shaft or axle extending entirely across the machine, for which reason I provide the peculiar box or journal shown, which is intended to afford a bearing rigid enough to keep the driving-wheels in an upright position and prevent the frame from sagging, and to prevent undue lateral motion of the frame and its load. I prefer to use in my machine suspension-wheels with wire "spokes." The frame of the device is composed of light iron bars or gas-pipe, the whole being made as light as consistent with strength and durability.

A are the driving-wheels, provided with hand-crank B.

C is the forward brace or tie-piece, reaching across the front part of the machine, bent, as shown in Fig. 3, to permit the revolution of crank B.

c is a hollow or tubular axle, firmly secured to cross-piece C, and provided with shoulder *d*.

a is the hub of wheel A, the bore of which receives the tubular axle *c*, the inner end of said hub touching shoulder *d*.

b is a spindle revolving inside the tubular axle *c*, and having attached to its inner end the crank B, and being made fast at its outer end to hub *a*. The spindle *b* may be attached to hub *a* by means of a nut and screw, as shown in Fig. 3, or preferably by means of a square head forged upon the outer end of the spindle *b* and countersunk into a square recess in the outer end of hub *a*, as shown in Fig. 1, the tubular axle being first slipped into the inner end of hub *a*, and the spindle *b* then being introduced into the tubular axle *c* from its outer end, so that the square head of the spindle fits and countersinks into the square recess prepared to receive it in the outer end of the hub *a*. The crank B is then keyed to the inner end of spindle *b*, as shown in Fig. 3. Undue lateral motion of the wheel inwardly is prevented by shoulder *d*, and outwardly by the contact of the crank against the inner end of tubular axle *c*. Upon the hand-crank B being turned the spindle *b* revolves inside the tubular axle *c*, and communicates motion to wheel A, the hub of which revolves upon the outside of axle *c*. The two driving-wheels, be-

ing thus mounted independently of each other, may be propelled with the handles of the cranks in line with each other or otherwise, at the will of the operator, so that he may rest himself by changing the relative positions of the cranks, and thus changing the motion of arms and body.

S is the seat for the operator; *f*, a foot-rest, in which terminates brake-rod *r*, provided with projection *p*, by means of which the operator with his foot may control brake *k*. (Indicated in the drawings.)

S' is an extra seat, attached to the rear cross-piece, G, of the frame.

E E are levers, hinged and having their fulcrum on the cross-piece G, provided with handles *h*.

i i are rods, connecting levers E E with crank B or equivalent cranks or wrists on the outside of wheels A.

In practice the rods *i i* should be curved to permit free action of the arms of the occupant of the front seat. By this arrangement a passenger in the extra seat holding the handles of the levers in his hands may, by moving the levers back and forth, assist in the propelling of the driving-wheels. These extra seats, levers, and rods may readily and easily be de-

tached. If desired, the extra seat may be made to extend across the entire width of the machine, so that more than one person may occupy the same. In such case a cross-bar should connect the upright levers E E, so that thereby all may assist in propelling the car, and in larger machines, if additional seats are added, additional upright levers, connecting-rods, and cross-bars may be added for the purpose described.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a railroad velocipede or hand-car, the combination of driving-wheel A, crank B, spindle *b*, tubular axle *c*, and hub *a*, said spindle revolving inside of said axle *c*, and said hub revolving on the outside of said axle *c*, substantially as shown and described, for the purposes specified.

2. In a railroad velocipede or hand-car, the combination of the auxiliary detachable levers E E and rods *i i* with hand-crank B B and driving-wheels A A, substantially as shown and described, for the purposes specified.

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Witnesses:

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