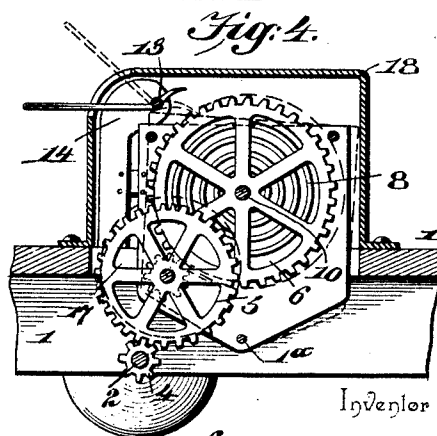
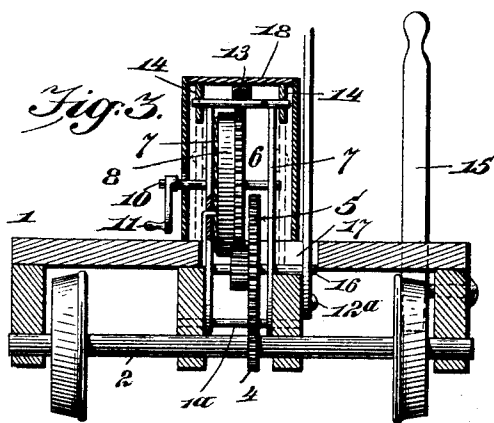
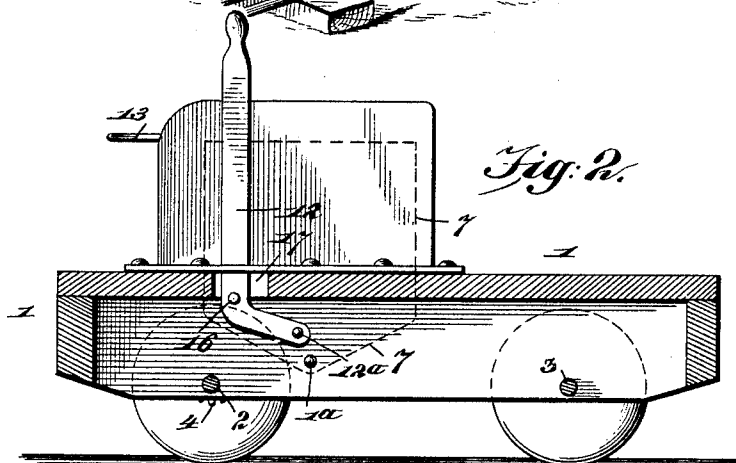
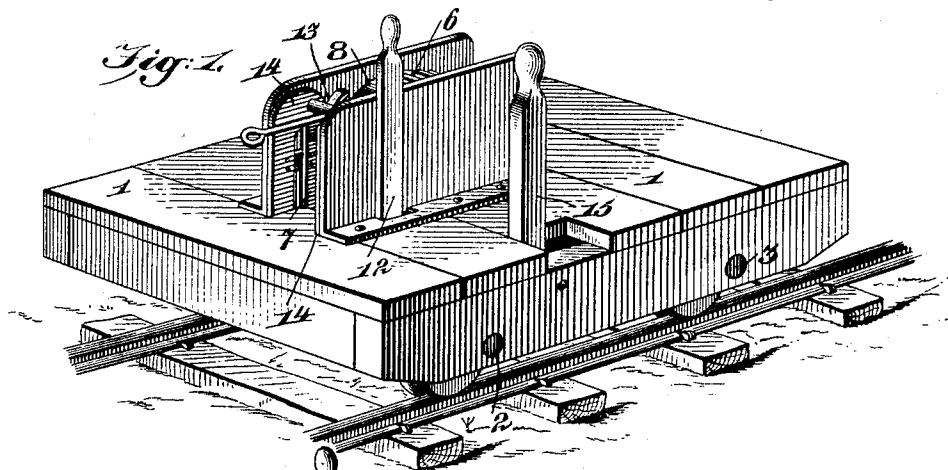


(No Model.)

I. N. GLOVER.
HAND CAR.

No. 586,601.

Patented July 20, 1897.



Inventor

Isaac N. Glover

Witnesses

W. S. Dieterich

By *his* Attorneys,

H. F. Riley

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

ISAAC N. GLOVER, OF ANNOVER, ARKANSAS.

HAND-CAR.

SPECIFICATION forming part of Letters Patent No. 586,601, dated July 20, 1897.

Application filed December 21, 1896. Serial No. 616,489. (No model.)

To all whom it may concern:

Be it known that I, ISAAC N. GLOVER, a citizen of the United States, residing at Annover, in the county of Cleveland and State of Arkansas, have invented a new and useful Hand-Car, of which the following is a specification.

The invention relates to improvements in hand-cars.

The object of the present invention is to improve the construction of hand-cars and to provide simple, inexpensive, and efficient means for propelling the same and also to enable the hand-car and the motor to be completely under the control of the operator, so that the hand-car can be quickly stopped and started.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

In the drawings, Figure 1 is a perspective view of a hand-car constructed in accordance with this invention, the top of the motor-casing being removed. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a transverse sectional view. Fig. 4 is a longitudinal sectional view of the motor, illustrating the arrangement of the gearing.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a hand-car frame, which may be of any suitable construction and which is provided with suitable bearings receiving front and rear axles 2 and 3. The front axle 2 has a pinion 4 keyed or otherwise fixed to it and meshing with one of a train of gears 5 of a spring-motor 6, which propels the hand-car. The spring-motor comprises a supporting-frame 7, the said train of gears, and a suitable barrel-spring 8, which is connected with the train of gears and with a winding-shaft 10. The winding-shaft 10 is provided with a crank-handle 11, arranged on the outside of the supporting-frame, and any suitable ratchet mechanism may be provided for locking the winding-shaft against retrograde rotation, and the train of gear-wheels may be arranged in any suitable manner in order to obtain the necessary speed or power.

The motor, which is provided with a taper-

ing lower portion, is pivoted at the apex at 1^a and is capable of a limited upward and downward movement on the hand-car frame to carry its gearing into and out of mesh with the pinion of the front axle, and the said motor is operated by a shifting-lever 12, fulcrumed on the hand-car frame and connected with the motor-frame. The shifting-lever, which is substantially L-shaped, is arranged vertically and is provided at its lower end with an arm or angularly-disposed portion, which is pivoted at 12^a to one of the longitudinal beams or sills of the hand-car, and the motor frame or casing is connected with the shifting-lever at the angle thereof by a pivot 16. The pivot 16 is arranged in an opening 17 of the hand-car frame, and this opening is of sufficient size to permit the motor to have the necessary swing to carry the lower gear-wheel of the train 5 out of and into mesh with the pinion 4.

The motor is arranged in a suitable casing 18, mounted on the car to protect the motor, and the handle 11 is arranged on the exterior of the casing, the latter being provided with a suitable opening to permit the necessary movement of the winding-shaft in throwing the motor into and out of gear with the pinion of the front axle.

The motor may be wound up at any time when the hand-car is stationary or in motion, and the gearing is checked and locked out of operation by a lever 13, fulcrumed between standards or supports 14 and arranged to engage the upper or main gear-wheel, which is connected with the barrel-spring. The standards or supports are rigid with the motor-frame, so that the lever 13 moves with the motor on the pivot 1^a.

To stop the car, the gearing is thrown out of mesh with the pinion of the front axle by the shifting-lever, and a brake-lever 15 is engaged with one of the front wheels. The brake-lever 15, which is disposed substantially vertically, is fulcrumed on the frame of the hand-car and passes upward through an opening of the deck, and its lower portion is arranged to engage the periphery of one of the front wheels.

It will be seen that the motor is simple and comparatively inexpensive in construction, that it is easily controlled, and that it will

enable a hand-car to be readily run at the desired speed. It will also be apparent that the hand-car is under complete control of the operator and may be readily stopped or started.

- 5 Changes in the form, proportion, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention.

What I claim is—

- 10 The combination with a hand-car provided with an opening 17, of a pinion mounted on one of the axles of the hand-car, a spring-motor provided with a frame having a tapering bottom portion and pivoted at its apex to
15 the hand-car, whereby it has a limited swing to carry the gearing into and out of mesh with the said pinion, a substantially L-shaped shifting-lever passing through the opening 17

and fulcrumed at its lower end to the frame of the hand-car, said lever being pivoted at its angle to the frame of the motor and being adapted to swing the same on its pivot, the standards 14 disposed substantially vertical, the check-lever fulcrumed between the standards and engaging the gearing, and a casing receiving the motor and mounted on the hand-car, said casing being provided with openings for the winding-shaft and the check-lever, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ISAAC N. GLOVER.

Witnesses:

S. A. BERRY,
BEN BEAUKINSHIP.