(No Model.)

2 Sheets—Sheet 1.

W. N. ROUSEY.

HAND CAR.

No. 584,523. Patented June 15, 1897.

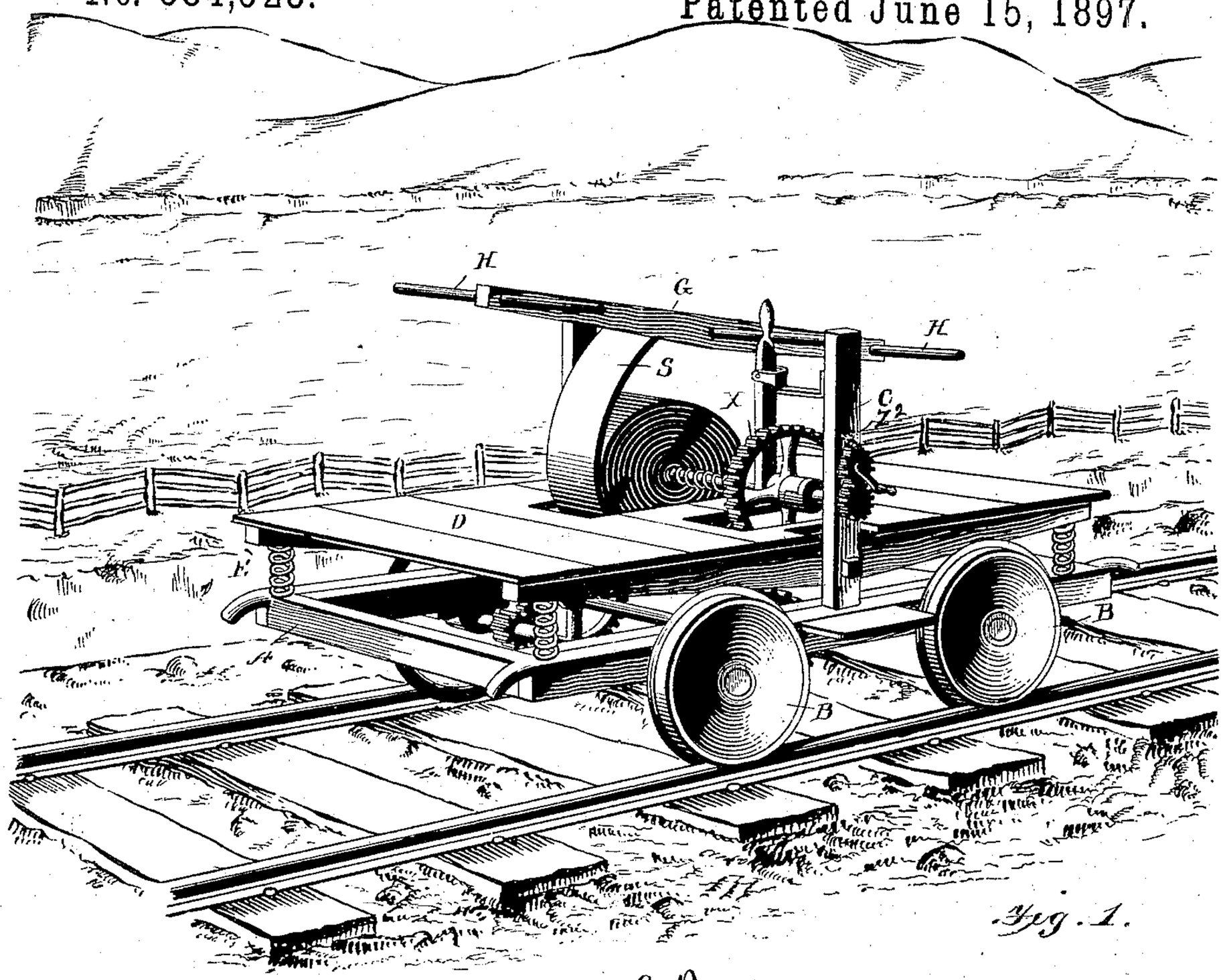

Fig. 1.

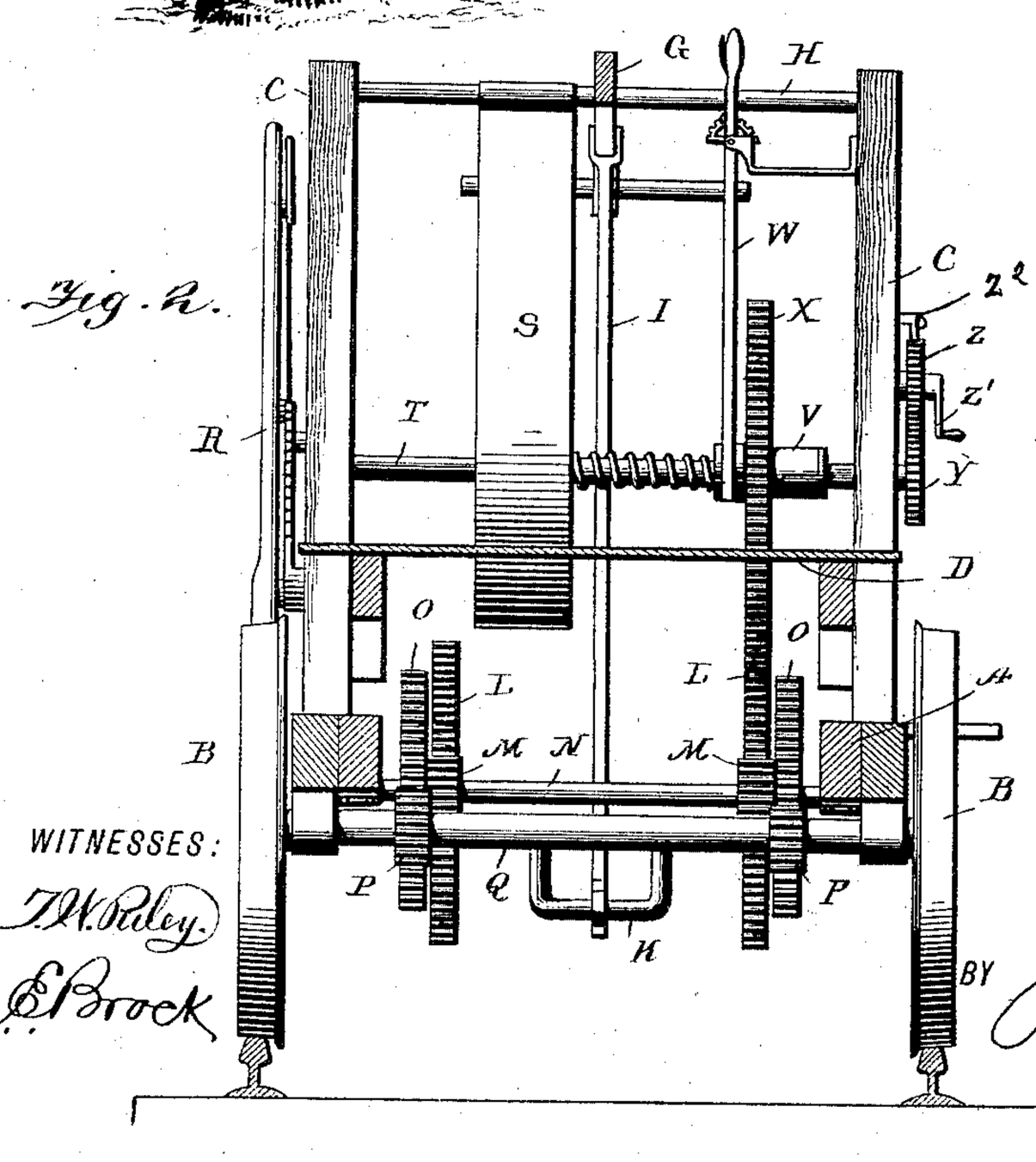

Fig. 2.

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(No Model.)

2 Sheets—Sheet 2.

W. N. ROUSEY.

HAND CAR.

No. 584,523. Patented June 15, 1897.

Fig. 3.

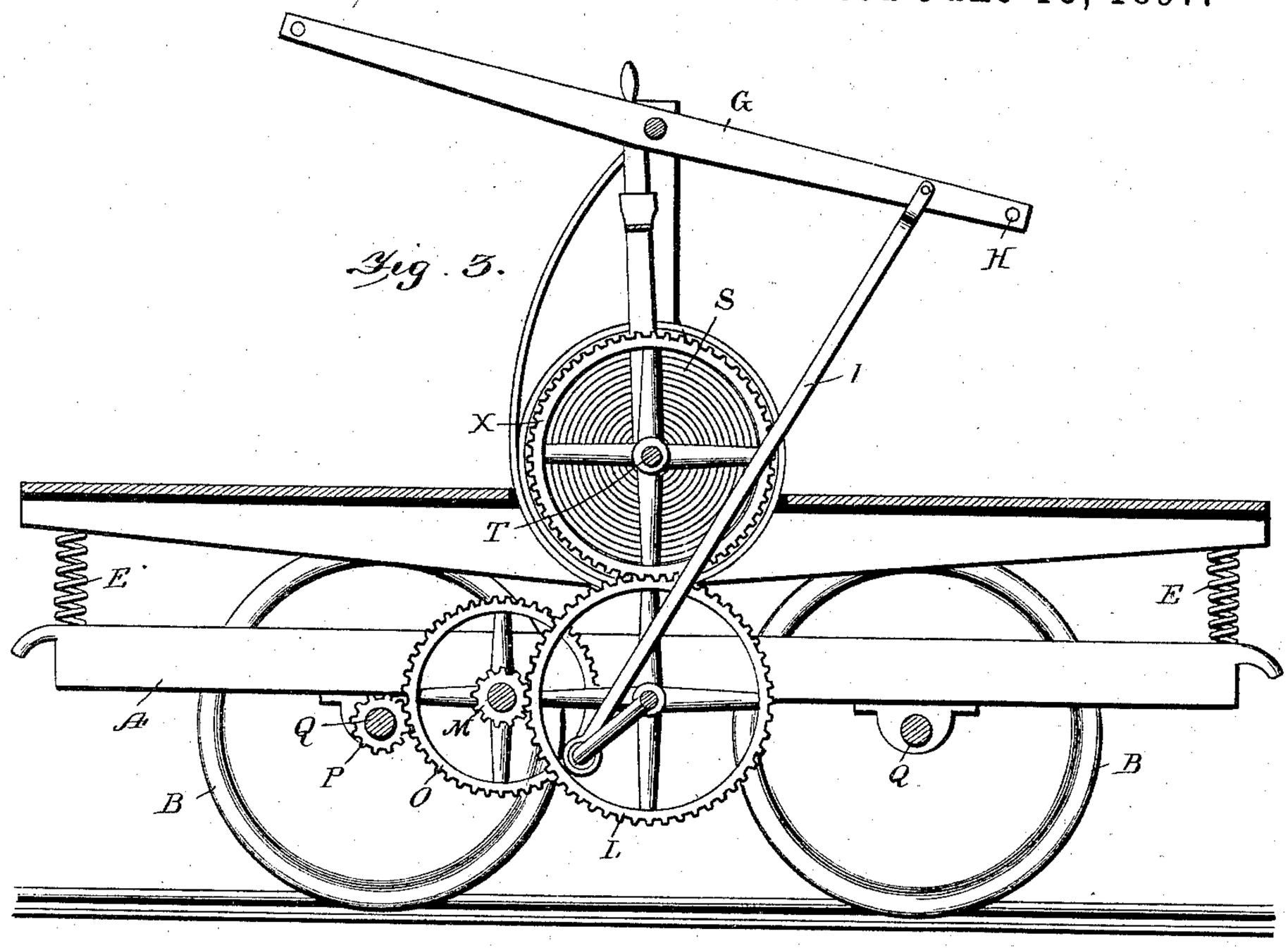


Fig. 4.

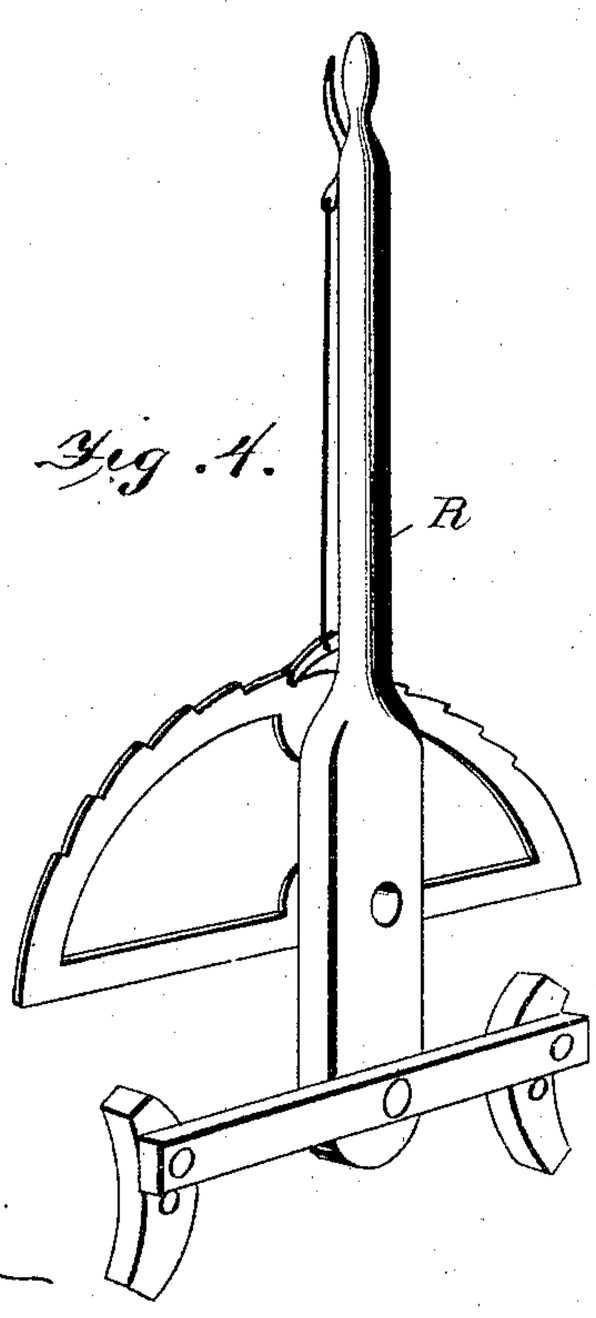
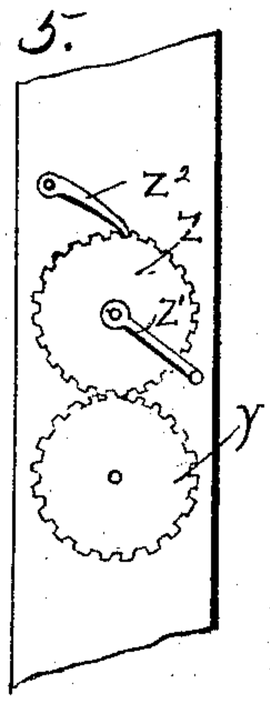


Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM N. ROUSEY, OF GRAYBILL, TEXAS.

HAND-CAR.

SPECIFICATION forming part of Letters Patent No. 584,523, dated June 15, 1897.

Application filed December 10, 1896. Serial No. 615,149. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM N. ROUSEY, residing at Graybill, in the county of Collin and State of Texas, have invented a new and Improved Hand-Car, of which the following is a specification.

This invention relates generally to hand-cars, and more particularly to an improved construction of hand-car whereby a greater speed is attained than with the hand-cars now in use and with less exertion.

Another object is to provide a hand-car with an auxiliary spring-actuated mechanism which can be used with or without the lever mechanism to propel at a rapid rate of speed.

With these various objects in view my invention consists, essentially, of a lever mechanism used in connection with a multiplying-gearing mechanism; and the invention consists also in the employment of a spring mechanism to be used in connection with the lever mechanism to increase the speed of the hand-car or to operate the same independent of such lever mechanism.

The invention consists also in certain details of construction and novelties of combination, all of which will be fully described hereinafter and pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a view showing the invention in use. Fig. 2 is a transverse vertical section. Fig. 3 is a vertical longitudinal section. Fig. 4 is a detail perspective view of the brake mechanism. Fig. 5 is a detail view showing the dog and pawl to engage the pinions in order to hold the springs until the car is about to be propelled.

In carrying out my invention I employ a main frame A, which is mounted upon the wheels B, said frame and wheels being of the usual construction. Extending upward from the main frame A are the side standards C, and pivoted to the said side standards is a platform D, said platform being supported at the four corners by means of the coiled springs E, whereby an easy-riding platform is provided. A cross-shaft H is fixed between the upper ends of the standard, and pivoted upon said cross-shaft is a lever G, having handles H at each end and by means of which the lever is worked up and down for the purpose of operating the hand-car. This lever has a pitman I connected therewith, which pitman is attached at its lower end to a crank-shaft K, journaled between the side members of the main frame, the platform being of course cut away to permit the operation of the operating-pitman. This crank-shaft carries gear-wheels L at each end, which gear-wheels mesh with the pinions M, mounted upon the shaft N, which shaft also carries gear-wheels O, which wheels in turn mesh with the pinions P, carried upon the axle Q of the car.

Now it will of course be understood that the gears L are larger than the pinions M and will therefore drive the shaft N at a rapid rate of speed, and as the shaft N carries the large gears O, which mesh with the pinions P, mounted upon the axle Q, it is clear that the axle will be revolved at a very high rate of speed and thereby propel the car.

A brake R is arranged at one side of the hand-car, operated by hand-power to throw the brake-shoes into or out of engagement with the treads of the wheels in order to retard the motion of the car whenever desired.

It will thus be seen that I provide a hand-car which can be operated in a simple and easy manner to propel said car at a very high rate of speed.

In addition to the hand-operative mechanism, however, I propose to employ a spring mechanism for aiding in the propulsion of the car or for the purpose of driving the said car without the aid of the hand mechanism. This spring mechanism consists of a strong convolute spring S, fixed at one end to the cross-shaft H and coiled about and fixed to the drive-shaft T, said shaft having a clutch mechanism V, operated by a lever W, adapted to throw a gear-wheel X into connection with the shaft T, said wheel X meshing with one of the gears L. A pinion Y is mounted upon one end of the shaft T, and meshing therewith is the pinion Z, operated by a crank Z′, so that by revolving said crank the pinion Z is turned, driving the pinion Y, revolving the shaft T, and winding the spring thereon. A suitable dog or pawl Z^2 is employed to engage either of the pinions in order to hold the spring until it is desired to use it in propelling the car. The spring can also be wound by throwing the gear X into mesh with the gear L while the hand mechanism is being operated to drive

the car in one direction. After the spring has been completely wound the clutch is operated to disengage the gear X and the gear L, as before described. When it is desired, however, to increase the speed, the said gear X is thrown into mesh with the gear L and, if desired, work upon the levers can be suspended entirely and the car propelled by the energy of the coiled spring.

It will thus be seen that I provide an exceedingly cheap and simple construction of car, one which is exceedingly light and durable, and one which can be propelled at an exceedingly high rate of speed either with or without the aid of the spring mechanism.

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

1. In a hand-car, the combination with the main frame having the upright standards, of the platform pivoted to the standards, and the springs beneath each corner of the platform, substantially as shown and described.

2. In a hand-car, the combination with the main frame and axles, the operating-lever and driving-gears, of the supplemental gear meshing with the main drive-gears, the shaft upon which said supplemental gear is mounted and a convolute spring attached to the said shaft, substantially as shown and described.

3. In a hand-car, the combination with the main frame, axles, platform, and standards, of the operating-lever, pitman, crank-shaft and gears, the convolute spring and shaft, clutch mechanism and operating-lever, and the supplemental gear-wheel mounted upon said spring-actuated shaft and adapted to be thrown into and out of gear with the main driving-gear, substantially as shown and described.

his
WM. N. × ROUSEY.
mark

Witnesses:
C. H. GROUNDS,
his
J. F. × FLOWERS.
mark